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ABSTRACT

Stressing the importance of teaching the writing skills students will need in the adult workplace, the conference papers in this booklet present some of the significant research in practical writing and show how this research applies to classroom instruction. Following the introduction, the five essays discuss the following topics: (1) youth, jobs, and literacy; (2) a negative entropy theory of practical writing; (3) research on practical writing in business and industry; (4) functional writing in the workplace; and (5) a curriculum model for written language as an essential communication skill for the competent adult. The booklet concludes with biographical notes on the conference speakers. (HTH)

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RESEARCH AND INSTRUCTION IN PRACTICAL WRITING

The proceedings of a research/practice conference held at SWRL Educational Research and Development, Los Alamitos, California, October 15, 1982.

Edited by

Larry Gentry

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INTRODUCTION

As a result of recent advances in composition research, educators have begun to recognize the need for re-examining and, where necessary, reorganizing writing curricula. The focal-point of recent research and, thus, of curriculum change, has been the writing process. While the shift in interest from product to process is, in itself, a welcome and much-needed change, some topics of concern to educators and the general public remain virtually unexamined. One such topic is the transferability of academic writing skills to "real-world" writing situations. Many people want to know if school-oriented writing prepares students for the writing they will do in their later roles as employed adults.

Consonant with this interest in job-related writing is the recent (albeit late) recognition that "literacy" is not synonomous with "reading." The ability to read connected prose does not guarantee the ability to write connected prose. As expanding technologies employ greater numbers of service personnel, it has become apparent that many otherwise qualified workers are unable to effectively communicate in writing. Some major companies are undertaking their own "re-schooling" programs to teach relevant composition skills.

Recognizing the contiguity of issues pertaining to job-related writing and literacy in writing, Southwest Regional Laboratory for Educational Research and Development (SWRL) sponsored a conference on October 15, 1982, to examine state-of-the-art research and practice in these fields. This book includes four papers that were presented at the conference and opening remarks delivered by Manlon Puryear, Executive President of the Orange County Urban League.

Mr. Puryear, drawing on more than 40 years of experience in national and community affairs, shares his perceptions of the relationship between education and employment. He stresses the importance of communication between all parties involved in the education and socialization of students--parents, teachers, and employers--and calls for an increased commitment to literacy education on the part of teachers.

In the first formal paper, Ruth Mitchell discusses the need for a new "practical" writing model to replace the formal "academic" model that is commonly taught in schools. She presents concrete examples of common errors that writers make when they try to apply traditional writing formulas to practical writing situations. Mitchell argues that functional report-writing should be reader-oriented, with conclusions first and background last. Most report-writing, she points out, proceeds from background to conclusions.

Evelyn Jacob presents an overview of recent research on functional writing in business and industry. Her paper synthesizes the results of significant ethonographic research in job-settings, and presents findings from her own most recent research effort, the Industrial Literacy Project.

Field-research and education are brought together in Larry Mikulecky's paper. He discusses the results of his extensive job-literacy research, and describes a project in which unemployed, underprepared adults are successfully prepared for word-processing jobs. Mikulecky also suggests ways in which teachers can better prepare students for the realities of workplace writing.

The final speaker, Gertrude Meyers, presents a model for a job-oriented writing curriculum. Drawing on her experience in designing a training program for a private business college, Meyers makes suggestions for instruction that are applicable at both secondary and post-secondary levels.

The purpose of this book is to present some of the significant research in practical writing and to show how it applies to classroom instruction. Research in this area is still in a formative stage, and the papers presented here represent the work of pioneers in a new field of inquiry. It is, however, already evident that certain segments of the education community will find immediate benefits in applying some of the instructional strategies contained in these papers. As the similarities and differences between practical writing and academic writing become more clearly delineated, teachers and curriculum specialists at all levels will be in a position to provide better and more meaningful writing instruction.

A number of important issues, including those relating instruction in practical writing to educational philosophy and social goals, remain virtually unexplored. We hope that these presentations will serve to stimulate thought and inquiry in these areas as well as in those more directly related to the improvement of the writing curriculum.

Larry Gentry
SWRL Educational Research
and Development

YOUTH, JOBS, AND LITERACY

Mahlon Puryear
Orange County Urban League

I grew up in an era that some of you may remember, and that some of you may not remember. I grew up in a section of the United States called the segregated South. In the segregated South the schools were segregated by law. Black children went to one kind of school and white children went to another kind of school. What was taught in the white schools was one kind of education and what was taught in the black schools was another kind of education.

Many of us who went to black schools grew up thinking we got a pretty "bum" education. For years we spent a lot of time and effort trying to get into those white schools. Well, finally the Supreme Court let us in. As time went by, some of us got it in our heads that geography had something to do with quality education. For example, some of us were convinced that western schools were superior to eastern schools. Well, my wife and I recently moved to California and guess what? We discovered that geography doesn't make that much difference.

The point that I'm trying to make is that quality education is not a matter of race or geographical location; quality education is a matter of commitment--

commitment on the part of teachers, students, parents, and the community that supports and profits from local schools.

In addition to commitment by individuals at each level, there must also be communication between all of those involved in educating young people. I recently spent some time at a local college listening to educators and industrialists discuss a plan for preparing young people for new technical careers. When I was asked for my comments I told them that, although it was a wonderful thing that industry and education would get together to talk about what our young people will be doing three years from now, I thought that they had failed to bring two important elements into the discussion--the parents and the children. Educators cannot plan the education of children in this country without parents being a part of the discussion. Thus, another key to quality education, an education that prepares a student for a good life and a successful career, is communication . . . communication between the parent and the student, between the parent, the student, and the school, and between the school and prospective employers.

I would like to share with you a news release that speaks to these points. It pertains to a speech that I made to a group of school counselors in New Jersey. It reads:

URBAN LEAGUE URGES JERSEY TEACHERS:
SHAPE TRAINING TO FIT TOMORROW'S MANPOWER NEEDS

ATLANTIC CITY--An urgent call to New Jersey educators, along with those throughout the nation, to press for more realistic training of student counselors related to current changes in job requirements and possibilities was voiced here today by Mahlon T. Puryear of New York, associate director of the National Urban League.

Mr. Puryear heads the League's "National Skills Bank" program, to be launched next Tuesday in five key centers across the country. The program is designed to seek out, classify and provide qualified Negro workers from which American industry and commerce can draw to meet its manpower needs.

Addressing a luncheon meeting of the New Jersey Organization of Teachers in the Madison Hotel, Mr. Puryear described as vital the need for education to strive toward giving counselors in training broader and more realistic training opportunity "to learn about the world of work and the changes that are taking place in job requirements of our time."

"It must be made mandatory that persons who counsel Negro youth learn fully the problems confronting Negro youth," declared Mr. Puryear.

"They must be thoroughly familiar with the ambitions, aspirations, family life and backgrounds of the Negro youth they are charged to guide and counsel. It is imperative that these services be up-dated, and increased at all levels of community action."

He stressed as imperative the need for the Negro community itself to utilize all available resources for erasing the traditional barriers to education and opportunity that still block Negro citizens from full participation in national progress, and called for special attention to the problems of Negro adults who, through no fault of their own, lack the basic skills and education to pursue retraining programs.

"Teachers, above all others, must be alert to the effects of automation on the Negro worker of tomorrow and constantly seek for expanding emphasis on training and retraining to fulfill the manpower needs of the future," Mr. Puryear said.

Does the problem sound familiar? Would you be surprised if I told you that this news release was not written in 1982, but almost 20 years ago--in 1963? Since I joined the Urban League in 1940, I have been begging teachers, counselors, educational administrators, and parents to help keep students in school. I have been begging employers to be honest in developing realistic job requirements for beginning jobs. I have been begging young people to learn to read, to write, to spell, to speak, and to form good work habits.

My observations have nothing to do with race. Every day I see students, black and white, who cannot write. When young people come to the Urban League for assistance in finding work, we ask them to write a paragraph about what they would like to be doing two or three years from now. That's when I find out that many of them cannot write. Some companies require a similar paragraph on their job applications. Many applicants can fill out all the blanks, but they cannot write a paragraph. Deficiencies in writing and spelling color the thinking of the interviewer before the applicant utters a word.

As teachers of writing, you have an opportunity and a responsibility to help rectify this situation. The fact that you are meeting today to discuss the practical applications of writing shows that you are moving in the right direction.

All of us here today have a job to do. I'm in the business of finding jobs for young people, and you're in the business of getting them ready for those jobs. Let's work together. Together we can create a better society--a society where the job is worthy of the worker and the worker is worthy of his hire.

NEGATIVE ENTROPY AT WORK: A THEORY OF PRACTICAL WRITING

Ruth Mitchell
University of California at Los Angeles

We all define writing from our own narrow perspective. A scriptwriter who enthralled a California Writing Project audience mentioned casually that he had earned his living as an English teacher before he hit the jackpot. "But I didn't teach them writing," he said, although he taught the standard 10th and 11th grade composition classes. Writing to him is the manipulation of plot and character, fiction, "creative writing" in college catalogs. On the other hand, a biology professor, complaining about students' verbal ineptness, declared that he didn't want "any of that fancy English stuff." For him, writing meant a logical explanation of observed phenomena.

Any theory must begin with definition, especially in view of idiosyncratic uses of terms such as those I've cited. I am going to place practical writing in an audience-response context, showing that it will be distinguishable from other kinds of writing because of its immediate and limited utility. It will be necessary to distinguish it from technical writing, which is not my subject here. I am also not concerned with the formatting of correspondence, the kind of knowledge to be expected from well-trained secretaries. "Business writing" here means what the manager dictates or scribbles, not what the secretary types. I will move from definition to features, and then to an argument for

understanding the psycholinguistics of response instead of imitating traditional strategies. I shall end with some suggestions for changing perceptions about practical writing through education.

DEFINITION

The first step in a definition of practical writing is to break out of our own particular tunnel vision and survey the writing to be found in a modern technological, information-oriented society. We especially need to do this because most of us who teach writing are English teachers. The bond between the teaching of writing and English teaching is, I submit, traditional rather than logical--the study and teaching of writing depends on applied psychology as much as on a knowledge of literature. But it is there. And so is our prejudice that writing comes between the covers of books, elevates the mind, and enlarges the moral vision.

But when you start to inventory writing, the kind associated with English classes diminishes in proportion abruptly. Consider your own daily activities. You might think your earliest morning contact with print is the newspaper, but before then you've probably read labels, consciously or unconsciously, and the directions on food packages--not to mention the cereal boxes without which millions of Americans could not have attained literacy. You've also listened to the morning news--someone wrote it before it was read on either radio or television. Your house is sprinkled with magazines and journals, from the specialty publications that keep you current with your profession to Life, Time, Newsweek, The New Yorker, People, and Playboy. If you have hobbies, you read magazines to keep you abreast of the latest equipment and ideas. If you're a member of a large organization, you get its newsletter, whether you want it or not. The first thing any group--anti-nuclear or pro-whale--produces is a newslettter. (There's an association of newsletter editors that has its own newsletter.) The mail brings you letters, flyers, bills, tax forms. Every appliance is accompanied by written instructions; every garment has a label telling you how to wash it.

And you haven't even gotten to work yet. There, another mountain of writing assails you--memos from associates, reports, invitations to meetings, announcements of forthcoming publications, letters of all kinds. Each profession has its own particular written burdens. Lawyers have briefs, points and authorities, legal memoranda; doctors have patient histories and medical research; English teachers have student papers.

It's hard to get up-to-date comprehensive figures on the economic impact of written information, because most studies are limited in scope. A few years ago, John Bormuth ("Science and the Citizen," 1979) calculated that at the beginning of the seventies--his figures were for 1974 and 1972--the average person spent 29 percent of time on the job either reading or writing, and 17 percent of time overall. Twenty-nine percent is a very high average, suggesting that a large number of workers spend 100 percent of their time involved with written communication. Bormuth collected data on what he called "literacy activities," which included reading, writing, and being trained for them. He attributed 26 percent of the 1974 GNP to these activities--more than twice the Department of Defense budget.

More recent figures have been computed for time spent writing only, and these may be pitched low because both employees and employers tend to report time spent physically producing marks on paper rather than all the other activities which we know are essential parts of the writing process. Faigley, Miller, Meyer, and Witte (1981) surveyed writing done by college-trained people mostly in Texas and Louisiana, and found that they spent an average of 23 percent of their working time writing. Even engineers--who often flee to engineering courses in college because they fear writing--spend 25 percent of their time writing. Only four out of 200 people interviewed by the researchers claimed to spend no time at all on writing. Faigley and his colleagues also quote Department of Labor statistics that project 55 million workers in the information sector in 1990--there were 45 million in 1980. Fifty-five million is one quarter of 220 million Americans. About a million word processors were in use

during 1981. The number will double by 1985 and increase to 20 million in 1990. As usual, the French have a word for it--the "informatisation" of society.

At the risk of pointing out the obvious, I'd like to underscore two facts about the writing we're examining: one, every bit of it--even the label on the peanut butter jar--had to be written by someone; and two, not a whisper about it is ever heard in traditional English classes. There, students either learn to express themselves in creative exercises or learn a strange kind of prose that flourishes in academia as goldfish do in small ponds, unable to exist outside a specialized environment--the theme, essay, or paper. Have you ever had to write a theme since you left college? And where did you learn how to write what you now write as a professional? Where did the instruction writer learn to write instructions and the proposal writer proposals? I take it that our task at this meeting is to widen the scope of writing instruction in high school, college, and university to include the kinds of writing found outside academia's fishpond. In doing so, we shall be able to improve the standard of writing out there and also be able to defend ourselves against the charge that our graduates can't write. How can they if we haven't taught them?

Let's try to corral the mass of writing we've identified and break it into categories. Following Wittgentstein and John Ellis (1974), I'll divide according to use (see Table 1).

As you see, the first major classification is between writing that is read by choice--literature--and that which is associated with work. Practical writing earns its living. Literature is non-essential entertainment. Hard as it may be for us English teachers to swallow, many excellent lives have been and are being led without its balm. To test this primary division, reflect that both reading and writing literature are matters of choice, but a businessman can't choose whether to read this memo or that (imagine this: "I'm not in the mood for mystery today," he says, selecting instead the work of the office romance writer). The

Table 1

Functions of Writing

PRACTICAL WRITING		LITERARY WRITING
Class 1	Class 2	
Writing On the Job	Mixed with Entertainment	novels plays poetry literary essay criticism
business writing proposals memos instructions formal documents summaries student papers legal briefs	advertisements newspapers magazines	scripts for TV scripts for movies scripts for radio

amount of practical writing far outweighs that of literature and probably always has, although historically literature has assumed a disproportionate importance because of the context-dependence of practical writing. Historically, the first writing we can decipher is practical writing--lists of provisions received by temple priests. Its preservation is accidental, as opposed to the conscious conservation of literary writing through copying and the cultivation of libraries. We all read Shakespeare, but in his own time, most of the writing was legal, political, religious, commercial. While literary scholars dissect Shakespeare to the point of counting the definite articles in the plays, historical scholars applying cliometrical techniques are constructing demographic statistics from parish records and Pipe Rolls.

But within this primary division between practical writing and literary writing, I've made a subdivision. This accounts for the kind of writing that exists in a twilight zone between the office and the easy chair, writing that has practical purposes but is sweetened with entertainment. Make no mistake, newspapers entertain. And if advertising doesn't, it won't achieve its primary aim--selling. Those magazines piled up on your coffee table give you information you want while entertaining you. You chose them because their subject

matter is a hobby or pastime--entertainment--for you. All members of this subgroup have some element of literature (they are chosen) and some of practical writing (they inform, are used), but there is little chance they will ever become literature in John Ellis' sense: "literary texts are defined as those that are used by the society in such a way that the text is not taken as specifically relevant to the immediate context of its origin" (Ellis, 1974, p. 44). Journalism embodies its ephemerality in its name.

These genres deserve a subclass of their own from the perspective of their writers also. People who write for newspapers, magazines, and public relations want to write. They have desire, even talent. They want to spend their working lives behind a typewriter. People faced with practical writing tasks don't necessarily want to write--they have to. That is why instruction in the major genres of Class 1 practical writing is essential if we are to prepare students adequately for their ordinary everyday working lives. To send out students from any level of education without ensuring that they can write an effective job application letter or a summary of a week's activities hamstrings them as surely as if they had not been taught how to add or multiply.

You're probably wondering why I didn't make technical writing an equally definite subgroup. Besides English classes, technical writing classes are the only other writing classes well established in the academic curriculum. However, there's a widespread mismatch between those classes and what the world understands as technical writing. I tried to clear it up in an article that appeared in College English in October 1981. Comments, which will be printed in the October 1982 issue, made it clear that I hadn't succeeded, so I'm glad of another chance, especially since doing so will enable me to sharpen the distinction between technical and practical writing.

The misunderstanding arises because "technical writing" has referents that differ according to context. "This is technical writing--you wouldn't understand it" is spoken by a researcher to a communications

analyst in hopes of deflecting close scrutiny. It commonly occurs in research organizations or in graduate seminars. A technical writing class (according to my very limited experience because UCLA has no technical writing instruction at all) seems to mean a writing class for engineering students. Too often its concerns are the same as those of the freshman composition course--mechanics and basic structure.

Technical writing in the world of work, however, means specific positions advertised under the Help Wanted heading of the newspaper. These positions demand technical knowledge of a field (frequently computers these days) with ability to write English--by which is meant usually spelling and punctuation. I cannot stress too much that a "technical writer" is first and foremost a person who can read blueprints and technical manuals and then transfer their contents to continuous prose for peers. No grace in writing is required--only accuracy. I called this "technical writing as advertised" in my article, hoping to circumscribe the term so that we could use it with an exact referent.

Technical writing is also found in small-circulation journals serving highly specialized groups (The Biophysical Journal, Transplantation, The Pacific Journal of Mathematics and so on). Thus two kinds of professionals need training in technical writing: those who want to become technical writers and those who will become researchers needing to communicate with their peers. The future technical writers must want to spend their lives writing, but--unlike aspirant journalists--their talents must lie primarily in the technical field. The future researchers will not want to write, but must understand the importance of efficient communication. Neither group can be trained by English teachers unaided by technical personnel. Technical writing instruction requires team-teaching in which English teachers must be prepared to act as junior partners.

Technical writing is essentially communication between peers who share a background of the same specialized information. It does not warrant more than

genre status in my practical writing division because in its purest form, it isn't very prevalent. Some species of technical writing are communicated almost entirely in symbols, such as microbiological and mathematical discourse. Pure technical writing is as close to being rule-governed (a matter I shall discuss later) as writing ever gets, because its vocabulary is dictated by the jargon of the subject and its order must follow that of the process being described, not a rhetorical formula. There is nothing in the world wrong with writing in the cryptic, allusive jargon of the group if you are writing to its other members; the problem arises when writers used to technical writing of this kind assume that they can write in the same way on all occasions.

I am perturbed by the confusion in the popular mind between technical writing and practical writing. Whatever isn't taught in regular English classes must be technical writing, it seems. When I explain that my practical writing course at UCLA teaches students--seniors who realize they need it--the kind of writing they will need to survive on the job, my interlocutors slowly become aware of the genres I've just listed. "But no one taught me how to write a memo," they say. "I just imitated the boss." Exactly. We have to make a case for instruction in a kind of writing that, unlike technical writing and literature, is so generally distributed that it mingles with the background. Borrowing from Russian formalist criticism, we have to apply the technique of "ostraneniye," rendering a familiar object strange in order to appreciate it (Lemon & Reis, 1965, p. 4).

FEATURES

Practical writing is context-bound, audience-specific, short-term, targeted precisely, use-oriented, and bound by economics. I am not going to illustrate each of these characteristics laboriously, one by one, because they are interdependent and each will be mentioned as major features are described. The final one, the connection between practical writing and money, underlies all others. Practical writing is written for money as surely as is a Judith Krantz novel, only indirectly. It is not only written on the job, but also

judged by its contribution to the economic health of the organization. Letters that get to the point and don't need follow-up phone calls save money. Reports that lead to efficient action make money. When I was asked in 1976 to design writing courses for the Rand Corporation in Santa Monica, management's motivation was economic--the researchers' reports were so long and so incomprehensible that they demanded excessive editorial input and were commonly delivered late to impatient clients. The necessary investment of additional time threatened the tight margin of overhead on which a non-profit corporation runs. Money and time are interchangeable in economic terms, much like mass and energy in nuclear physics.

Practical writing is context-bound and audience-specific to a degree not realized by those who think of writing as self-expression or as a disagreeable task. Practical writing takes place within a confined ecosystem that has its own power structure. You write to achieve certain ends--perhaps your own, certainly your boss's--and you'd better not introduce any elements that will frustrate those ends. So you have to write with all your antennae tingling to avoid political problems and to maximize opportunities. Writing is permanent. A conversation can be forgotten or even denied, but the written memo is there, for fame or notoriety.

It is difficult for students who have written only in answer to questions and have been expected only to regurgitate facts to understand the communicative function of practical writing. It is written because someone wants to know something, and to use that information--and "use" is the important word.

Students also don't realize that most practical writing, especially that done in the corporate context, is a collective product. In school you shield your paper from your classmate with a protective arm, but on the job you write one part of a document and other members of the team write other parts. Then the whole is reviewed by a team leader, who may ask one team member to rewrite most of it, including your piece. Then the report will proceed up through several levels of management review (as many as ten in some government

offices), being changed at each stage, and finally it will reach the editorial department. The completed document may contain a few words that you originally wrote, but they may be in a different place and may not mean what you intended. Pride of authorship has no place in the process.

In order to introduce students to team writing, we at UCLA have always included a group project in our year-long course, Practical Writing and Editing. The classes have written a brochure for UCLA Writing Programs, a students' guide to high living on the cheap in Westwood, and a catalog of UCLA's interinstitutional programs. They had to cooperate in teams to collect information, write and edit each others' contribution, decide on format, and proofread the final product.

Whether as a member of a team or on their own, practical writers should have these questions in mind when writing:

> What am I doing with this memo/letter/ proposal/etc.?
>
> How am I doing it?
>
> Who's going to read it first? Later?
>
> What do I want that person to do?

These questions will guide strategy and tactics. Instruction should make clear that the piece of writing must fit into its niche in the ecosystem. Two excellent books will give you the details of efficient targeting and audience analysis: Designing Technical Reports: Writing for Audiences in Organizations, by J. C. Mathes and Dwight W. Stevenson, which, despite the first part of its title, concerns itself with general questions of organizational communication; and Writing for Results: In Business, Government and the Professions, by David W. Ewing, editor of the Harvard Business Review, which suggests introspective questions for the writer such as "Should my communication be put in writing? Should it come from me? Should it come now? Will the audience 'hear' my facts and ideas in the manner I intend?"

TRYING TO WRITE ACCORDING TO RULES

The need for clarity as to audience, purpose, and the means of matching them is unfortunately best illustrated when it's lacking. Figure 1 shows a memo from the office of architect of the U.S. Capitol.

The Architect of the Capitol
1793
Washington, D.C. 20515
November 26, 1979

MEMORANDUM

To: Building Occupants

From: Architect of the Capitol

Subject: Electrical Service -
House Office Building Annex 2

We have reached the point in the renovation of House Office Building Annex 2 whereby it will be necessary for the main electric service capacity to the building to be reduced to one half the full capacity in order that new electrical switchgear can be installed in the location now occupied by existing equipment.

Under normal operating conditions during this next two month period, no inconvenience to the occupants is expected to be experienced. However if cable failure or other unexpected conditions were to be experienced that would further reduce the remaining service capacity, we would be forced to immediately discontinue all non-electrical loads until emergency repairs could be effected.

As a precaution against the loss of total building power, we request that all occupants make a concerted effort to turn off every electrical device not being used and to reduce the normal lighting level wherever possible. These measures should provide us with the margin of capacity necessary to sustain all normal electrical power requirements during this period.

In case an emergency power reduction becomes necessary, we will strive to maintain priority loads such as computers and other special equipment.

Your cooperation in this matter, for the mutual benefit of all occupants, will be greatly appreciated.

Figure 1: Memo illustrating wordiness and confusion.

Now this memo is inefficient because it wastes time getting to its main message, uses excessively formal language, and explains with too many words. It should have read something like this:

> For the next two months, we must cut electric service to House Office Building Annex No. 2 by half the usual capacity so that we can install new electrical switchgear. We ask you to switch off every electrical device not being used and reduce normal lighting level.
>
> If everyone cooperates by using only the electricity strictly necessary, we should be able to sustain normal electrical service while the new equipment is being installed. We are, however, operating on a small margin. A cable failure would require us to discontinue all non-critical loads until emergency repairs were made. We would try as far as possible to maintain priority service, especially to computers and special equipment. With your cooperation and no emergencies, service in the next two months should not differ from normal. Thank you.

Now why didn't the memo take this briefer, more direct form? Because the author thought of his writing as a task instead of a communication. Because he applied unexamined models and did not ask himself what he wanted people who read his writing to do.

Let's pursue this question of unexamined models with another example. Figure 2 shows an uncorrected application letter seriously (alas) written by a member of my first practical writing class at UCLA.

The writer of this letter, like the writer of the memo, thought that these genres were supposed to sound odd. Both writers had in their heads the rhythms of phrases like "is expected to be experienced" and "enclosed please find," just as many letter-writers still think you should begin with "Yours of the 5th to hand." Like the businessman I mentioned earlier who imitated his boss's memo-writing style, these writers never

The William Morris Agency, Inc.
151 El Camino Dr.
Beverly Hills, Calif. 90048

RE: AGENT TRAINEE PROGRAM

Gentlemen:

Enclosed please find for your perusal my resume. I am currently a UCLA senior majoring in Business-Economics, and shall graduate in June of 1980. I have heard many good things about your program, and would feel honored to partake in it.

As indicated by the resume you will notice that my experience in the field is limited, yet concise. I am an individual of varied skills and interests, along with a strong desire to succeed in whatever endeavor I may undertake. Clearly my interests lie in business and entertainment, though; a combination which could make for a successful career. Not only have I learned from my practical experiences, but my college curriculum has included many classes which are directly tied to the show show business world, (i.e., business law, advertising, accounting, marketing).

After inspecting both the resume and application I trust you shall find my past history quite acceptable. In that event, I would be very appreciative if you please contact me at your earliest convenience so that we may further discuss any possibilities for my immediate future.

Figure 2: Application letter illustrating use of poor models.

questioned the preconceived ideas they had picked up. They were motivated by two instincts: protective coloring and economy of effort. If you write like your boss, you'll fit into the organization, and if you can find a neat rule of thumb to write by, you won't have to worry about taking responsibility for your own choices. We'll come back in a moment to the mistaken idea of audience exemplified by the follow-your-leader rule, and look now at the desire to save effort by applying a template.

Writing is not a rule-governed procedure, much to the dismay of teachers, students, and testmakers alike. In that fact lies its frustration and fascination. We English teachers know about the infinite specificity of language, how words change in context so that one cannot predict any outcome from initial ingredients.

People trained in other disciplines, especially the harder sciences, want words to behave like numbers. They want to be able to apply a formula and not have to pay any more attention once the steps have been followed. In mathematics, say Davis and Hersh (1981, p. 36) "writing follows an unbreakable convention: to conceal any sign that the author or the intended reader is a human being. It gives the impression that, from the stated definitions, the desired results follow infallibly by a purely mechanical procedure." As all art aspires to the condition of music, science aspires to mathematics, for the attitude to writing described here is adopted as closely as possible by social and physical scientists alike. As I mentioned above, only the most technical of technical writing can be regarded as formulaic, because it is driven by its referents, not by rhetorical considerations. Every other kind of writing must be approached as an element in a unique situation, in which the only constants are the questions I have listed, not their answers.

An application letter has an immediate purpose within the general context of getting a job for its writer--the application letter gets the recipient to read the resume. It's like the first few moments of an interview, permitting the interviewer to size up the applicant to see if it's worth spending the time to talk at length. So the letter-writer must ask: "How do I make myself sound valuable?" Answer: tell the reader immediately what you can bring to the organization, usually your skills and experience. Don't tell the reader what he can do for you--a job opening isn't an opportunity for charity. Write without error and without affectation, just as you would dress correctly for an interview, not in a cocktail dress. Because you want your resume to be read out of the pile on the employer's desk, give him some reason to remember you. In this example, my student did everything wrong, especially the last. This young man had been the business manager for a theatre for the previous two years, a fact entirely missing from his letter.

Further, the letter's tone is ludicrous. The writer thought that when writing, you should sound unnatural, as if you were wearing something like a

stiff shirt, so formal it hurts. He remembered unfortunately some things a "wonderful English teacher" (to use Jim Quinn's phrase ‡1980, p. 187) must have taught him: the supposed difference between "shall" and "will," and formal diction like "perusal" and "endeavor." In this, my poor student was under the same misapprehension as the writer in the office of the U.S. Capitol architect, that when writing you've got to follow rules you don't apply when speaking normally.

Rules and their misapplication are at the root of much poor practical writing. The search for them reminds me of the drunk looking for his keys under the lamp where the light is. I can predict two questions when I first meet a class of professionals in an organization that has hired me to improve their writing: "Can I get writing done more quickly?" and "Can you give us some rules to follow?" Although the short answer is "no" in each case, I've learned not to give it immediately, but instead to show that the questions are related and betray a misunderstanding of writing. They reveal a desire to relegate it to the periphery of attention.

My long answer is a paradox: If instead of trying to skate over writing, you face it, learn about it and about the secondary benefits of writing, you may or may not find your own writing task completed sooner, but you will find it more rewarding. You'll be looking where the keys are to be found. In most cases, the overall length of the writing process, from rough notes to final production, will be shorter. The extra time invested by the original writer will obviate repeated returns for clarification and excessive editorial time. The organization economizes if writers take their task seriously.

Benefits for the writers themselves include management approval, faster publication, and the secondary gain I mentioned. Writing assists cognition--in fact, writing and learning are almost equal. Researchers and report writers either don't know this or repress the fact. They believe in the package-delivery theory of writing, that writing renders on paper an already completely worked out idea. Thus they run head on into

frustration because writing shapes the reality; it doesn't reproduce it. This is true even of a one-paragraph memo, where, for example, groping for words reveals that a request for a new furniture arrangement is really an attack on someone else's space. People who want to apply a template to writing and get it over will always write badly because they won't let the writing work for them. They attempt what Peter Elbow (1981) calls The Dangerous Method--getting it right the first time. Instead, they must be persuaded to write a rough draft (or rough notes if they can't imagine having enough time to write something twice completely) and then use it to reshape their concepts. This cannot usually be done in the head--the writer must become a reader and identify with the eventual recipient of his piece. Only then will he see something of the implications, the possible difficulties, the ambiguities of what he has written. And what he finally writes will answer the anticipated objections and so gain in effectiveness.

WRITING LIKE THE BOSS

Now let's turn to the issue of protective coloring. If the boss writes like a computer with constipation, should you? Instinctively (for we are political animals) it seems like a good strategy. There is even research to prove it. J. Scott Armstrong (1980) of the Wharton School of the University of Pennsylvania found that management scientists actually gained prestige through unintelligible writing. "A study of 10 management journals found that those more difficult to read were rated higher in prestige by a sample of 20 faculty members . . . those passages that were rated easy in readability were judged to be less competent in terms of the research" (p. 85). Armstrong concludes that the editors of research journals must take the responsibility for reform.

As you will have understood by now, my theory of practical writing is based on audience-oriented utilitarianism. I have claimed that the examples I cited were not useful, even though they conformed to accepted conventions. They <u>sounded</u> like business writing. My position seems contradictory and I'm surprised that

audiences and readers don't call me on it immediately. I am saying that practical writing must meet the needs of its intended readers, but it shouldn't follow traditional models that apparently have always been used to meet those needs. My position can be demonstrated empirically--I think you agreed that my examples didn't do the job in their original form--but it will take a sophisticated and lengthy argument to support it theoretically. Bear with me, however, because on this argument depends our claim for academic intervention.

Practical writing until very recently has been an unexamined product. I mentioned early in this paper its conspicuous absence from English classes. Tradition fills the vacuum. I'm going to take as an example the organization of reports and particularly the order of sections frozen into place by the sciences--physical, natural, and social--that have adopted the traditional format. The example has been chosen because it becomes a paradigm for my thesis: traditional, unquestioned writing styles do not serve their audience's needs because they do not anticipate how people read. Writers who produce reports (or memos) exactly like those of their organizational mentors make themselves inconspicuous at the cost of writing effectively.

This is the traditional scheme for a report, enshrined in the American Psychological Association's Publication Manual and for that reason often called APA style:

1. Introduction
2. Method
3. Results
4. Discussion

What such an order does is to rehearse for the reader the writer's own progress through his task. It uses the temporal order as a kind of objective correlative, and so is easier to write. (Although, to judge from the procrastination of researchers faced with reporting

results, you wouldn't think so.) The model is pervasive. Everyone who has a report to write or recommendations to make labors through the presentation of the problem, what they did about it, what results their investigations revealed, and finally--what the audience really needs--the conclusions. You open a report eager to find out what the researcher recommends, and your energy drains away as you find that the first section is headed "Background." There may even be a literature review as well. And if you are a decisionmaker rather than a fellow researcher, your interest in the details of the method (subdivided according to the APA style into "subjects," "apparatus," and "procedure") will be severely limited. Please note that I am not denigrating the inclusion or importance of these sections, but criticizing their order.

This traditional format is adopted not only in reports throughout the scientific and management communities but whenever anyone hears the word "report." It's like a Pavlovian reflex--ask someone to write a report and their glands begin to secrete first the introduction, with background, then the method, and on and on. Figure 3 is an example from an investigator's report, written for a district attorney. I'm quoting it unexpurgated from the beginning, although it continues for another two paragraphs.

This report clearly follows the scheme I've been pillorying, although without the formal headings. We are given the background in the introduction: The writer sets the scene for us, including the motivation for his presence. He then gives us his investigative method in exhaustive detail. Note that even when he finally gets us into the bathroom, he doesn't jump to the exciting news--he methodically notes the fire damage to the plastic fittings and the closed shower doors. The reader is in no way prepared for the shock that awaits us behind those doors. And that surely is the main point of the report. Fires are routine but mercifully not all of them result in the discovery of bodies in the bath. The discovery corresponds to the results and conclusions--it's what the reader really needs and wants to know.

I responded to the address in question at the request of XYZ Fire Department, arriving shortly after 3:30 a.m. Upon arrival, the fire had been "knocked down" and smoke ejectors were in operation. Battalion Chief Smith was on the scene, as was Investigator H. of the XYZ Fire Department. The scene is a ground-floor apartment in a two-story multiunit apartment complex.

Entering the apartment, I was directed to the dining area where Investigator H. pointed out several items to me, including a purse with its contents emptied onto the adjacent couch. We then proceeded to the two bedrooms of the apartment where I was told the fires had originated. In the northeast bedroom evidence indicated the fire had originated in the closet with heat damage to the upper walls and across to the bed. The window was closed during the fire, but had been broken open from the outside and there was evidence that a dry chemical extinguisher had been directed in through the opening.

The northwest bedrooms showed evidence of two separate fires. The first was a small fire near the foot of the bed on the right side. This fire consisted of clothing and damage to the bed frame. A much larger fire occurred in the walk-in closet adjacent to the bedroom. There was no evidence to show that these fires were connected in any way to one another and Investigator H. stated he was of the opinion that the fires were deliberately set. I concur in his findings and believe the fire to have been deliberately set.

After photographing the scenes, Investigator H. and I began the fire cause investigation in the northeast bedroom. As Investigator H. was concluding the search at that point of origin, I began a search of other areas for evidence of prior activity within the apartment. Going into the bathroom I observed that the plastic items within the room had suffered heat damage. This included the upper portions of the tub enclosure doors which were in a closed position. I slid the door open from the right-hand side, moving to the left of the tub enclosure, and in doing so found the body of a young adult female. Both legs of the woman were raised, with the knees drawn back towards her chest, so as to result in the lower portion of her torso being at the end of the tub and directly under the spout. Her right arm was stretched out straight along her side and resting on the bottom of the tub. Her left arm was bent and over her head. Her head was back with the face up. Her eyes were closed, mouth open. The body was nude with only a blue scarf around her neck. The tub was partially filled with water which came to within approximately two inches of her mouth. There was no water visible in her open mouth.

At this point, I advised Chief Smith that there was a body in the tub and then advised Officer T. who was on the scene to take the arson report. Officer T. then confirmed the presence of the body and requested homicide detectives and a Watch Commander from the XYZ Police Department. I then requested that all other personnel leave the premises.

Figure 3: Report illustrating traditional format.

The investigator who wrote this with so much control would not report it orally thus. He probably told his colleagues and superiors that he found a body in the bath when he went to investigate a fire. That statement (with suitable elaborations, of course) should appear in the first paragraph of the report--probably as the first sentence. For that is the natural order of communication: we need to understand the main point before the details make any sense. In other words, we process information top-down. This assertion has been demonstrated by numerous psychological experiments (Charrow, 1980; Meyer, 1975; Thorndyke, 1977), perhaps most dramatically by Bransford and Johnson (1973), who found that experimental subjects could not understand or remember this passage, which has no orienting statement:

> The procedure is actually quite simple. First you arrange things into different groups depending on their makeup. Of course, one pile may be sufficient, depending on how much there is to do. If you have to go somewhere else due to lack of facilities, that is the next step: otherwise, you are pretty well set. It is important not to overdo any particular endeavor. That is, it is better to do too few things at once than too many . . ..

Readers must be told first that the passage describes doing laundry, for without that information they cannot make sense of it.

Instead of the traditional order, good practical writers substitute this one:

1. Introduction of problem, results and conclusions; map guiding reader to the organization of the report.

2. Detailed discussion of reports and conclusions, including such descriptions of method as pertain to their understanding.

3. Method

4. Literature review and background (perhaps in appendices)

This order not only delivers the essential information top-down, it also accommodates the problem of multiple audience. It begins with what all readers want to know, and then guides select groups of readers to their particular interests. Everything is there as before--in no way am I suggesting omission of important details--but in an order that maximizes utility. The order is both natural and rhetorical. It reflects the way our minds sift out what's important for retention and it acknowledges that writing is not ploddingly referential. The reader does not need to follow the writer through each step taken to arrive at the conclusion--writing is a symbolic shortcut to the essence.

Another way to appreciate the difference between the traditional and the new order is to use Linda Flower's (1981) distinction between writer-based and reader-based prose, expounded in her excellent guide for the practical writer, Problem Solving Strategies for Writing, chapters nine and ten. The traditional order is based on the writer's needs--Flower calls it an "egocentric focus"--which manifests itself in the narrative organization we have examined. Reader-based prose has a structure that guides the reader to the major points; is organized hierarchically, with the principal ideas or facts mentioned first in all rhetorical units from paper to paragraph; and focuses on the topic, using rhetorical development, not the writer's own experience, as the organizing principle.

Now someone is bound to object that I have unfairly slandered the APA style because in fact it mandates an abstract at the beginning of the paper. Abstracts or summaries act as a sort of apology for the dimly perceived inoperative organization of the report. But they aren't really a reader-based solution, because they are merely tacked on. (Some even appear at the end of the report.) Abstracts in most of the journals that adopt the APA style are frequently separated from

the main body of the article by a different typographical style, thus signaling that they aren't really to be read as part of the article. The existence of the abstract makes easier the natural reading order--an experienced reader of journal articles reads the abstract, decides whether the article is of interest, and if it is, immediately reads the results and conclusions sections. Only if they raise methodological questions will the methods section be read. In fact, it's a fair guess that readers who read articles in their printed order are probably the authors.

A couple of minor objections must be cleared up before we move on. The order I'm suggesting will seem suspiciously familiar to experienced composition teachers. Isn't it the old thesis and development pattern? Of course. But note that I omitted "conclusions" from the pattern. It is the same old pattern, provided that the thesis and the conclusion are understood to be identical. Students have unfortunately sometimes been taught that the thesis is a provocative statement to get you going and that the conclusion is what you really think. Or the thesis is a question to which the conclusion is the answer. Or the thesis is a statement that I am going to compare and contrast certain features, without any conclusion other than that I've done it. But understood as an assertion that is to be argued, the thesis acts as the governing statement that guides the selection and order of all the arguments, examples, and facts brought in to support it. If students properly understand the function of a thesis in English 1, they will have less trouble when presented with sophisticated practical writing tasks.

"If I put my conclusion up front as you want me to, what do I put in the conclusion?" researchers ask plaintively, afraid they've lost their training wheels. I am tempted to answer as the King told the White Rabbit: "Begin at the beginning," the King said gravely, "and go on till you come to the end: then stop." But a sense of ending is necessary--we react with dissatisfaction to a rhetorical unit that simply stops, unless it is clearly followed by another unit. Since the conclusion has now become the thesis and has its rightful

place at the beginning, the concluding material can consist of implications, proposed research, suggested action, tentative interpretation of events (this might be appropriate for the investigator's report about the body in the bath), or conceptualizing the events, rather like a receding panorama shot concluding a movie. In the case of conclusions, as with the rhetorical order in general, possibilities are opened up rather than limited.

On the sentence level, psycholinguists have established that the normal English sentence pattern proceeds from known to unknown, or, in technical terms, from theme to rheme (Halliday, 1968). The reader expects the first part of a sentence to refer backwards and the final part to provide new information. Therefore, the final position in the sentence has built-in emphasis: if you expect new information, you are alert for it. The evidence on some other sentence-level choices is more ambiguous. It does not seem clear that the passive voice verb is more difficult to process than the active voice. So far the evidence relates back to sentence emphasis--it depends what you want to focus on (Charrow, 1980). For example, you may wish to place a noun in the final position and can do so only by making the verb passive.

As with large-scale organization, writers must decide the major idea they want to stress, and manipulate sentences accordingly. They will receive help with the technical aspects of sentence design from three short books: Revising Prose by Richard A. Lanham (1979); Style: Ten Lessons in Clarity and Grace, by Joseph M. Williams (1981), for practical writing in general; and Plain English for Lawyers by Richard C. Wydick (1979), with an obviously more restricted application.

EDUCATION FOR PRACTICAL WRITING

Let me now pull my argument together. If practical writing is to meet its readers' needs, it must follow guidelines based on research to match writing to reading. Success gained through writing like the boss or following traditional models is gained in spite of,

not because of, its strategies. But in view of research like Armstrong's (1980), how can sensible practical writing--which delivers its message immediately in short crisp concrete sentences and wastes no one's time--replace the incumbent style? This is a question of sociology rather than of psycholinguistics or rhetoric.

The broad answer is education, but in several phases and disguises. You can't just barge into corporate headquarters and tell them all that they can't write. Mostly you have to wait for them to come to you, usually for economic reasons, as I mentioned earlier. When they do, be sure that management personnel are included in the instruction, whatever form it takes. This tactic avoids the situation where subordinate personnel learn eagerly how to tighten, brighten, and shorten their writing, only to find it lengthened, deadened, and stultified as management reintroduces in editing all the traditional ballast.

Once you've got management working with you over a piece of prose, it's surprisingly easy to persuade them that shorter and tighter is better. (Armstrong didn't present his revised research articles personally, but asked for opinions on a questionnaire. This is excellent research procedure, of course, but changing ideas about writing--another purpose, obviously--requires personal intervention.) They write as they do because they simply don't know there is any other way to do it. Larry Frase (1981) demonstrated that readers of technical writing were perfectly happy with writing that strained their patience and their eyes until they were shown more accessible versions. Comparison is a remarkably effective weapon in the war against obscurity, especially when sharpened by time- and money-saving considerations.

But of course the war is being conducted only on one front--hardly a front, more like isolated pockets of a guerrilla war--if education about writing takes place only on the job. Clearly it belongs as part of everyone's preservice education. Training in practical writing should be provided at every level, from elementary school students learning to write letters, to

graduate students writing doctoral dissertations. It need not take the same form--sometimes instruction can accompany another course, as an adjunct, sometimes be confined to a writing class where situations are modeled. There is no need for such practical writing instruction to displace the present literature-oriented English class. It should supplement it. Of course, all forms of education presently suffer from poor taxpayer support, so that calling for more writing instruction may seem like whistling to the empty air, but to ignore the need is short-sighted in view of the exploding information sector of the world economy.

If all students receive instruction in practical writing, in understanding how readers react to writing and what they need to comprehend easily, then clearly time will take care of the follow-the-leader syndrome, as those trained in practical writing replace retiring superiors. Efficient instruction in practical writing will eventually permeate organizational structures if we take our educational responsibility seriously. I have put that word in the emphatic position, because it implies the need for writing instructors to do some homework, to read outside the field, to accommodate themselves to research results conveyed in unfamiliar terms. Instruction must continually modify itself as research discovers more about psycho- and socio-linguistic processes. It will do no good if practical writing teachers confine themselves to correcting errors and repeat the shibboleths that get English teachers a bad name. Good writing of any kind is not judged by the absence of error but by the presence of a considered rhetorical strategy responding to a reader's expectations and serving the writer's purposes. Good writing instruction cannot come from assigning chapters in a textbook but from modeling response as I have demonstrated. It requires sentence-by-sentence analysis of a piece in rough-draft form, assessing the effect of organization, word-choice, word placement on the overall purpose. Communication takes place between people, whether the medium is rag paper and quill pen or a word-processing program on a computer. Instruction in writing similarly depends on interpersonal response, preferably among a group of readers reacting honestly and considerately.

All writing aims at control. We want to control the language, the topic, and the reader. Control is partly due to increased knowledge. The creative brainstorming involved in writing will increase knowledge of the topic. Instruction will help with audience analysis and technical information about grammar, syntax, vocabulary. But something more is required for control--respect for writing itself. If we are successful in educating practical writers, they will not despise writing or try to skip over it in a hurry. They will understand it as the most distinctly human activity and embrace a chance to assume its power and its glory.

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RESEARCH ON PRACTICAL WRITING IN BUSINESS AND INDUSTRY

Evelyn Jacob
George Mason University
and
Center for Applied Linguistics

Interest in job-related writing has developed from both practical and theoretical concerns. Some researchers are motivated by concerns for developing curriculum; others want to understand how the functions and social contexts of writing influence writing processes. Most studies have described the kinds, frequency, and importance of writing tasks for specific jobs. Recently, some researchers have looked beyond the surface aspects of job-related writing to examine the processes, functions, and social contexts involved in writing on the job.

This review summarizes the findings of descriptive studies of writing in work-related settings in the United States and Canada. Directions for future research are also discussed.

All of the jobs studied involve some writing, but the writing tasks vary by job and specific location. Most of the writing of non-professional and non-managerial workers involves filling in forms, occurs daily, and is closely tied to the content of specific jobs. Among these workers, writing that is not on forms is usually in an abbreviated and telegraphic style. By contrast, workers in professional or managerial jobs write various types of connected text, and they vary the style and content of their prose in response to the audience and the purpose of the document.

In addition to performing job-related writing, many workers also write to get a job or to participate in training, and most write in order to fulfill government regulations or to gain access to benefits administered through their places of employment.

WRITING THAT IS PART OF SPECIFIC JOBS

Most researchers have described writing done for specific jobs as part of more comprehensive studies of literacy on the job. Some report results from a cross-section of jobs; others examine specific blue-collar or white-collar jobs.

Mikulecky and Diehl (1980) interviewed 107 adults from a wide range of occupations (including fast-food cooks, machine operators, and corporate vice-presidents) in the Bloomington, Indiana, area. They report that most (65%) of the writing tasks are done daily and that filling out prepared forms is the most frequently cited writing task (42%). Writing letters or memos is the next most frequent task (23%), followed by writing a report or article (11%), and noting work accomplished (7%). The remaining tasks include writing on blueprints, writing dimensions on masonry, keypunching, and marking products.

In another study of a cross-section of jobs, Hoagland (1982) investigated the job-related writing of 19 community college students in the suburbs of Washington, D.C. These students included professional, technical, managerial, clerical, and service employees, as well as skilled and unskilled blue-collar workers. Her findings are consistent with those of Mikulecky and Diehl (1980). Filling out forms was the most frequently cited task (47%), followed by making lists (21%), writing letters, memos, instructions, or notes (15%), and taking messages (15%). Over half (63%) said that they write less than five hours a week, and almost all (90%) said that they write primarily for an internal audience. Communication and accurate recording of information are the primary functions of their job-related writing.

Blue-collar Jobs

As part of the Industrial Literacy Project, Jacob (1982) observed and interviewed workers in a milk-producing plant in Baltimore, Maryland. A wide range of blue-collar occupations were examined, including truck drivers, skilled craft workers, pasteurizers, truck loaders, machine operators, and unskilled workers. Two-thirds of the blue-collar workers' uses of written documents occur daily, and one-fifth occur at least once a week. Most (73%) of the documents they use are forms, and most (57%) of their uses of these documents involve writing.

Several studies present information on the writing tasks of specific blue-collar jobs. Mechanics and craft workers were studied by several researchers. Moe and his colleagues (1979a, 1980a, 1980c, 1980d, 1980f) interviewed supervisors about the tasks of one worker at each of three sites. They found that the most typical writing task for mechanics (including heating, air conditioning, maintenance, and auto mechanics), electricians and welders, involves writing short notes to describe work accomplished. These notes are written in an informal and telegraphic style in which unnecessary words are eliminated and complete sentences are not required. Mechanics and electricians may also write a few words to accompany their sketches or diagrams. Jacob (1982) reports similar findings for truck and plant maintenance mechanics. In the milk-producing plant she studied, boiler engineers and maintenance mechanics fill out forms to record information while monitoring equipment in the plant as well as write notes describing work accomplished.

Jacob also reports findings for various kinds of truck drivers. Truck drivers who have responsibility for delivery routes write more than those without regular delivery routes. Route drivers write on approximately twenty different kinds of documents. Over half (68%) of their writing tasks occur daily, and almost all are on forms. Drivers without regular routes write on 2-13 different kinds of documents. As with the other drivers, most of their writing tasks are daily, and most are on forms.

Data on the writing tasks of machine operators comes from several studies. Hall and Carlton (1977) interviewed employers and new employees in various segments of the economy in order to describe the basic skills requirements of jobs that could be filled by high school students in a medium-sized urban community in Canada. They report that production jobs in textile manufacturing rarely require any writing. As one young employee said, "You don't have to write much . . . just mark down the lot number, and how many dozen there is, and fill out your time card" (p. 189). As part of a state-wide survey in Wisconsin, Farning, Boyce, and Mahnke (1975) found that machine operators fill out forms about twelve times a week and take notes about nine times a week; other writing skills are used infrequently.

Jacob (1982) found variability in the writing tasks associated with production jobs in a milk-producing plant. For example, pasteurizers and by-products workers write on eleven different kinds of documents, while filling-machine operators write on only two different kinds of documents. For all production workers, however, most of the documents they write on are forms, and most interactions are daily. As part of a pilot study conducted in a semiconductor plant in Connecticut, Jacob (1978) observed and interviewed production workers. These workers fill out four forms as part of their daily tasks.

Data on semi-skilled and unskilled workers are presented by Hall and Carlton (1977) and Jacob (1982). According to Hall and Carlton, employers state that few writing skills are needed by these workers. Their view was echoed by employees, as the following statement shows: "You don't have to write. You fill out a card for the hours worked, and fill out a card for the number of plates you welded. There's an automatic counter" (p. 195). Jacob reports similar findings. Plant cleanup workers fill out two forms daily; garage workers who operate the gas pump, change and fix tires, or lubricate trucks write on less than four kinds of documents. Most of these documents are used daily and most are forms.

White-collar Jobs

The Jacob (1982) study also describes the writing activities of white-collar workers at a milk-producing plant. These workers include managers and supervisors, technicians, office and clerical workers, cashiers, keypunch operators, store clerks, and sales representatives. Slightly over half of the white-collar workers' uses of written documents are daily, and approximately 83% of these daily interactions are with forms. Forms also account for 60-75% of the documents they use weekly or less than weekly. Approximately 60% of their daily interactions with documents involve writing, as do 45% of their weekly interactions, and 34% of their less frequent interactions. Very few letters are written at this plant; most of the writing of white-collar workers involves filling out forms or transferring and compiling information from one or more forms to another.

The writing tasks of office and clerical workers were examined in several studies. Hall and Carlton (1977) found that both employers and employees report that general office workers "need the basic clerical skills of clear and legible writing, and competence in grammar and spelling" (p. 186). A survey of the writing needs of office workers in Wisconsin (Farning et al. 1975) found that completing forms is their most important writing task--a task undertaken about fourteen times a day. Taking notes, proofing, and editing are each done one or two times daily. Reports and business letters are each written once a day or less. The clerk-typist that Hoagland (1982) studied spent 25-30 hours a week completing forms as well as editing and typing memos, letters, and reports. Her work included revising her supervisor's writing and correcting grammatical errors. Hoagland comments that this worker was "functioning not only as a typist, but as a writer in the collaborative writing process that often occurs in government agencies" (p. 82).

Crandall (1981) presents a detailed picture of the writing tasks of a group of clerical workers in a government agency. She reports that reading and

writing activities constitute the major portion of their work day. The writing tasks these workers perform include the following: transferring information from forms and texts to other forms; entering new information, altering, or deleting data on forms; transferring numbers and names from forms to IBM cards and to other forms; typing texts from handwritten drafts; writing notes to examiners about the status of items in a case; keeping records of productivity for oneself; preparing cards of productivity for a group of examiners; keeping lists of difficult words to spell; and keeping notes and manuals about various procedures.

She points out that, despite the fact that these clerical workers do not have any legal or scientific education, they deal with documents written by and for lawyers, scientists, and engineers. She examined how the clerks functioned in such an environment and reports that they "demonstrated a remarkable series of strategies for reducing literacy demands in their work and for maximizing their knowledge, including strategies for avoiding unnecessary reading and writing, searching for information by exploiting the redundancy in both format and topic within the texts and across texts in a file, substituting oral information for written, and effectively using manuals, especially those they developed for themselves" (abstract).

Secretaries write more than general office workers. The Wisconsin survey (Farning et al. 1975) found that secretaries engage in many types of writing activities. They complete forms, write business letters, and proof or edit written communication about six or seven times a day. They also take notes and write general reports about once a day. Moe and his colleagues (1980e) report that secretaries transcribe materials written by others in formal or technical style. Spelling and grammar are important for them so they can "catch" mistakes made by the authors.

Hall and Carlton (1977) examined the work of clerks and tellers in financial institutions. They report that these workers have little need for writing skills beyond those involved in writing numerals. This view was supported by a recently hired teller who said

that "as for writing, that's mostly forms and transferring figures. Other writing is about two percent of the time" (p. 180).

Hall and Carlton also found that sales workers need minimal writing skills. Employers report that writing is a very small part of the job for these workers. Employers' complaints have more to do with the legibility of handwriting than with more complex skills such as spelling and sentence construction.

Draftsmen were studied by Moe and his colleagues (1980b). These workers write memos and formal labels for their drawings. Complete sentences are not needed, and a telegraphic style is acceptable.

Several studies examined the job-related writing of workers in health occupations. The Wisconsin survey (Farning et al., 1975) revealed that health workers take notes, and proof or edit documents once or twice a day. In another study (Moe et al., 1979b), supervisors reported that practical nurses need to write on charts and files. The supervisors also indicated that, while grammatical completeness was not demanded in this writing, accuracy was important. Anderson (1982) conducted a case study of a practical nurse in his composition class. He found that the nurse's writing consisted mainly of writing patient-progress notes in an abbreviated format, and recording observations, assessments, and plans for action. This type of writing required accuracy and the proper use of medical terms.

Odell and Goswami (1981) examined the writing of administrators and caseworkers in a social service agency. The researchers were primarily interested in variations in the style and content of the writer's products, and in the reasons for these variations. They found that, in their writing, these workers are sensitive to rhetorical context, and they vary style and content according to their awareness of the purpose and audience of their writing. Administrators write primarily letters and memos. For these workers, the status of the audience and their personal relationship with the audience are the most frequent reasons for modifications in style and content. Caseworkers write

primarily client reports. Their modifications are more likely to be based on the subject than on the audience. For example, they are influenced by factors such as the desire to provide an accurate, complete, non-redundant account, and a desire to document a conclusion they have drawn.

WRITING THAT IS NOT PART OF SPECIFIC JOBS

Descriptions of the writing workers use to do specific jobs do not present a complete picture of job-related writing. Many workers use writing to get a job or as part of training for a job; all workers must fill out some government forms as a condition of employment in the United States; and workers also need to write in order to gain access to many of the benefits that are administered through their places of employment. Data on these aspects of job-related writing were collected in a semiconductor plant and milk-producing plant as part of the Industrial Literacy Project (Jacob, 1978, 1982).

To apply for a job in the milk-producing plant, workers must fill out a four-page application form. This involves writing words, sentences, and numbers. Those applying for a driving job must have the appropriate driver's license; to get a driver's license, they have to fill out forms and take a written test on the relevant laws. Applicants for a delivery route must also take a written math test. People applying for jobs that involve receiving or testing milk or for the job of boiler engineer must obtain the required license before being hired. This involves passing a written test on information related to the desired job. Upon becoming an employee of either company, workers must fill out forms for federal and state withholding taxes. In the milk-producing plant, blue-collar workers also fill out a union application form.

Workers at the milk-producing plant rarely participate in any formal training at the plant before beginning their jobs. Production workers at the semiconductor plant, however, do participate in a training course lasting a day and a half before beginning work.

A trainer takes the employees through a series of workbooks that deal with practical issues such as safety, appropriate dress in work areas, cleaning procedures, and filling out the required forms, as well as more theoretical topics such as integrated circuits and the chemical processes involved in the tasks they will perform. After the trainer presents the material and orally quizzes the employees, they are required to take a written test at the end of each section. These tests involve identification, fill-in-the-blank, and multiple-choice questions. The trainees Jacob (1978) observed had difficulty with the written tests. They complained that they had trouble spelling and that it had been a long time since they had written anything. Several commented that they found the emphasis on school-type instruction during the training sessions difficult. One said that she could easily learn while actually doing a job, but that learning through written materials was difficult for her.

Writing, particularly filling out forms, is needed to obtain various benefits in both plants. In order to participate in medical and insurance plans, employees must fill out forms. If a claim is made, other forms must be filled out. Forms must also be filled out to participate in the local credit union, and employees must fill out other forms to apply for a loan or to withdraw money from their accounts.

SUMMARY AND DISCUSSION

Most studies of job-related writing have focused on writing tasks associated with specific jobs. All blue-collar jobs examined involve some writing, although the specific writing tasks encountered differ in number, kind, and frequency. None of the jobs described involve writing complete sentences and most involve filling out some kinds of forms. Skilled craft workers and truck drivers with delivery routes use writing more than semi-skilled and unskilled workers. Craft workers and truck drivers write notes in a telegraphic style as well as fill out forms. Production workers primarily record numbers on forms. Unskilled workers may fill out one or two forms as part of their jobs.

Of the non-professional white-collar workers discussed, secretaries seem to use the most complex writing skills. They write letters, take notes, proof and edit written communication, and fill out forms. Other office workers perform similar tasks except that they rarely construct letters. Tellers and sales workers have few writing tasks as part of their jobs except recording numbers on forms.

The job-related writing of the professional and managerial workers studied to date varies widely in format. Some write primarily short reports in which complete sentences are not required, while others write lengthy reports, and still others write letters and memos. These writers are sensitive to rhetorical context, and vary the style and content of their writing according to the purpose and audience of the document.

Job-related writing is not limited to that involved in performing specific jobs. Many workers use writing to get a job or as part of training for a job. All workers must fill out government forms as a condition of employment in the United States. And workers also need to write in order to gain access to many of the benefits administered through their places of employment.

Research has just begun in the area of job-related writing. Future work needs to focus on the processes involved, and on the functions and social contexts of writing tasks. Job-related writing that is not part of specific jobs also needs further examination. Filling out forms is a significant part of most job-related writing. More research needs to be done on the skills and knowledge required to competently fill out various kinds of forms. Work done in the Document Design Project (Holland & Redish, 1981; Redish, 1981; Rose & Cox, 1980) explores some of these issues.

Several of the researchers who have examined job-related writing have drawn on their experience in conducting this research to comment on methodology. Jacob, Crandall and Scribner (1979) state that interview data with supervisors and employees, and written

job descriptions are not sufficient for a complete picture of job-related writing activities. These tend to focus on the routine and recurrent aspects of the job and often omit many "miscellaneous" tasks which so often involve writing. "From our research, we see that it is necessary to actually observe people interacting with documents, to analyze what they have to do with them and what purposes are being served" (p. 12). Jacob et al. also state that observations are important to understand the social conditions under which workers use and produce written documents. Employees often use a variety of sources and strategies for reducing the literacy demands of their jobs (Crandall, 1981). An understanding of these processes is important for a full picture of writing on the job.

Jacob et al. (1979) also indicate that documents cannot be analyzed in isolation from the various tasks performed with them. They state that "the work setting is characterized by enormous variability in the kind of informational activities that may be conducted around a single document--some employees may be reordering information on a form, others using the same form to answer a set of specific questions and still others may be organizing a filing system around it" (p. 12).

We are only beginning to understand job-related writing. Future work that examines process, functions, and social contexts can make important practical and theoretical contributions.

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FUNCTIONAL WRITING IN THE WORKPLACE

Larry Mikulecky
Indiana University-Bloomington

Functional writing, as it is performed by workers on most jobs, bears little relationship to composition as it is taught in most schools or to actual writing as it is practiced by most students. This is not to say that writing does not occur in the workplace. Research observations from workers in hundreds of occupations indicate that the average worker may be producing more "writing" on the job than the average student does in school. The most significant differences, however, are in the types of writing performed on the job and the contexts in which that writing occurs.

This paper examines the context and parameters for several sorts of writing observed on the job. Specific attention is given to the types of writing that are currently called for and to emerging and seemingly conflicting trends related to functional writing in the workplace. Finally, the paper examines research results and effective job-training program models to suggest directions and implications for teachers and trainers.

A CONTEXT FOR FUNCTIONAL WRITING IN THE WORKPLACE

Theoretical arguments have been made that literacy is of one piece. This position maintains that writers

cannot be separated from the audiences with whom they communicate; that writing, reading, listening and speaking are intertwined; and that artificially separating one aspect of communication from others is usually counter-productive. Although this position can be argued against theoretically, it does provide an extremely accurate description of functional writing in the workplace.

Communication on most jobs rarely makes use of a single modality for an extended period of time. For example, in a recent study of nurses and electronic technicians (Mikulecky, in press), it was found that workers changed modality regularly and often. Workers were observed minute-by-minute for eight hours over a three-day period. Once each minute a trained observer recorded whether the worker had spent the minute speaking, listening, reading, writing, or doing a task. If the minute was divided among modalities, the classification of multi-modality was recorded. Workers averaged less than 10 minutes a day of writing or reading which extended for one uninterrupted minute or more. They would read, write, perform operations, ask questions, and listen to responses in an on-going cycle. Over 95% of nurses' work-time was multi-modal. The electronic technicians averaged closer to 60% multi-modal work-time, but only because a substantial percentage of their time was classified as uninterrupted "doing."

There are other indications of this mixture of communication modalities in the workplace. In an earlier study involving 150 workers and nearly 100 students (Mikulecky, 1982), this author observed that workers asked questions of each other twice as often as students did in schools. Heath (1982) has observed adults at home and on the job in two communities in the Carolinas. She found that many reading and writing tasks became group projects involving "joint oral negotiation of meaning" (p. 30). Formal writing "always had to be renegotiated into an informal style," and group processes involving shared experiences and decision-making were involved in processing and producing written information.

One reason that so much mixed modality and social interaction is involved with literacy on the job has to do with the purposes for literacy use. Although there is some variation among occupations, research results indicate that between 60% and 90% of reading and writing on the job is done to complete a task (Diehl & Mikulecky, 1980; Mikulecky, 1982). Efficient completion of the task drives the activity. Writers and readers are usually concerned with completing the task rather than perfectly producing or even completely comprehending a literacy product. There are, of course, exceptions to this generality. A manager writing a memo to the president may be quite concerned about clarity, and an electronic technician is usually aware that his or her notations must make sense to other workers. Such emphasis on product is quite rare, however.

A personal example directly related to this conference may illustrate functional literacy on the job. When Larry Gentry contacted me on the telephone to present at this conference, I checked my calendar to determine whether I had a scheduling conflict. There was no conflict, so we discussed who would be attending this conference and which of my work would be worth presenting. Larry agreed to summarize our discussion in a letter and send me a contract. A few days later a package of material arrived. I skimmed over general information about the conference, deciding that I would read it more carefully later and noticed that I was called upon to sign two versions of a three-page contract. Being a skeptical individual, I read the contract carefully. It appeared that for a token payment, I was selling not only the time it took me to write this paper, plus my travel time, but also copyright options to reproduce it, translate it, and so forth. I was concerned. I was happy to do the paper and take the time to present it. I probably would have done it for free for the opportunity to meet with conference participants. The copyright made me wary, however, since I intend to publish a collection of my papers. A telephone call to SWRL led to a call to the contracts office, which led to a letter clarifying the uses that would be made of the paper.

Having taken care of that aspect of job-related literacy, I noticed that I was also called upon to fill out a federal Employees' Withholding Allowance Certificate for the token payment I was receiving. I skimmed the form and began filling it out. I did quite well with my name and address. By the second page, however, I was in difficulty. On page two, I was called upon to use a fairly complex table to determine how much money should be withheld. The explanations about category classifications did not seem to clarify matters much. I read them over several times carefully and ended up with more questions. I called down the hall to see if my colleagues had ever had to deal with this particular form. None had, but each had a form-filling horror story to share. Finally, I grew angry at having to go through so much complexity for what was essentially a contributed effort. I noticed a line under the Privacy Act section that said if I didn't wish to reveal personal information, I would be treated as a single person with no withholding allowance. I presume this means my token payment will go to the government and a part of it will trickle down to the planners of this conference.

Besides being vindictive, this example serves another purpose. The functional writing and reading required for just this small portion of my job called for all language modalities, several task-driven literacy strategies, and the use of a social network to aid my functional writing. The functional writing, though involving less than several dozen words, was intertwined with several other forms of communication that complicated the activity. Filling forms, interpreting tables, skimming, reading carefully, calling upon others for clarification, and eventually accepting alternative pragmatic solutions characterize much occupational writing and reading at several levels of employment.

FUNCTIONAL WRITING DEMANDS ON THE JOB

Much of the literacy research done in the workplace has focused upon reading demands rather than upon writing. What is known about writing on the job, to a

large extent, must be drawn from data that is secondary to the main thrust of these studies. Diehl (1980) examined 100 workers from a variety of occupations selected to represent the full range of occupations in the U.S. government's Dictionary of Occupational Titles. Workers were asked to provide examples of writing tasks they had recently performed on the job. The workers cited a total of 276 tasks. Of these, 42.4% involved filling out prepared forms. About one-third of the occupational writing involved composing communications in paragraph format (22.5% of tasks involved writing letters or memos and 10.5% involved writing reports or articles.) The remaining one-fourth of writing tasks involved recording or noting work completed (6.9%) and "other" (17.7%). This large "other" category included composing blueprints, key-punching, marking products, and doing a variety of occupation-specific tasks. These writing tasks tended to be highly repetitive. Over 65% of the tasks were daily in nature, with another 10% occurring either weekly or monthly.

Data on job writing was gathered but not reported in Mikulecky (1982). A special analysis of the data for this paper examined differences in reported writing demands by occupation levels. The Diehl research reveals that the vast majority of occupational writing involves forms, job orders, letters, memos, and reports. The Mikulecky study of 150 representatively selected workers broke these tasks down by major occupational categories (see Table 1).

In all, 89% of workers reported that they regularly produce written products of the types listed in Table 1. These who did not generally come from the non-professional levels and tended to fit into Diehl's categories of product-marking and "other." There are, as one would expect, large differences among groups (Chi Square significant at $p = .0003$). What is perhaps most significant, however, is the fact that over half the workers in every category did report some production of letters, memos, or reports. This majority participation remained true even when the 11% of workers not included in Table 1 were added to the calculations. These forms of correspondence were not

TABLE 1

OCCUPATIONAL WRITING TASKS BY OCCUPATION GROUPS

	Professional & Technical (n = 48)	Clerical & Sales (n = 29)	Service (n = 12)	Blue Collar (n = 43)
Forms & orders only	8.3%	17.2%	33.3%	39.5%
Forms, orders, & correspondence only	37.5%	24.1%	33.3%	37.2%
Forms, orders, correspondence, & reports	54.2%	58.6%	33.3%	23.3%
TOTAL	100%	100%	100%	100%

always in traditional letter format. Notes and scrawled memos were included in the correspondence category. Over half of the blue-collar workers from the 43 jobs surveyed by Mikulecky (1982) and from two-thirds to over nine-tenths of all other workers, however, did have to compose written information in some form.

It should be noted, however, that place of work greatly influences functional writing demands. Diehl's (1980) results are based on observations in 26 workplaces and the Mikulecky (1982) data were drawn from 35 workplaces. Though these studies have attempted to be representative, they are still far from a complete representation of all types of workplaces. The work of Evelyn Jacob (1982) highlights some of these workplace differences. Jacob undertook an intensive ethnographic study of literacy in a single workplace--the "Green Spring Dairy." Results of this single-site study agree, in part, with the Mikulecky data, but also highlight the great differences among workplaces. In the final research report to the Ford Foundation, Jacob

notes that at the dairy, "approximately 85% of all work-related movable documents are forms" (p. 60). This is nearly double the average reported by Diehl (1980). Jacob also reports that at the dairy, fewer than 10% of functional writing tasks involved writing a sentence or more. This diverges widely with the average figures on notes, memos, and correspondence reported by Mikulecky. There are some similarities among the Diehl survey, the Mikulecky survey, and the Jacob study on the topic of writing frequency. Like Diehl and Mikulecky, Jacob reports that the vast majority of job-writing tasks occurred at least once a week if not daily. In fact, Jacob reports that only 14% of blue-collar dairy workers' interactions with written material occurred less than weekly.

The most likely conclusion to be drawn from these differences among studies is that, although functional writing demands may involve some composition, it is possible in some workplaces mainly to fill out forms. The Jacob data indicate that it is possible to hold even a white-collar job at the "Green Spring Dairy" and limit most of one's functional writing to filling out forms.

Odell (1980) offers yet another perspective on functional writing in the workplace. Odell gathered a number of writing samples from an insurance company. After analyzing this material, Odell concluded that business correspondence often purposefully violates traditional writing conventions and even common-sense dictates about clarity. Writing would be intentionally informal or indirect or even confusing, depending upon the actions the writer wanted to elicit from the reader. The context of having a specific audience, previous experience with the audience, and awareness of the task at hand dictated what the composition would finally look like. Most business writers observed by Odell were fairly adept at this sort of writing, although their final products often violated the dictates of traditional writing instructors.

WRITING OF STUDENTS IN SCHOOLS

Studies of the amount of writing, reading, or listening that students do in school are confounded by

the problem of time on task. Frederick, Walberg, and Rasher (1979), for example, determined in a study of high school classrooms that an average of 46.5% of class time was lost during each class period. Loss of class time occurs while teachers pass out materials, while teachers attempt to get student attention, and while students are distracted. On the average, nearly half of student classroom time is lost. To this loss must be added time lost through passing from one class to another and time officially allocated to non-academic pursuits.

Many studies do not consider this high percentage of school time that is not on task. The tendency is to credit students as having attended to a task for the full time allocated to that task by the teacher. A critical reader of studies that do not observe actual student time on task might be well advised to divide reported times of student activity in half.

Applebee (1981) has done the most extensive recent study of writing in American schools. Using data from the observational portion of his study, Applebee reports that

> an average of 44 percent of the observed lesson time involved writing activities, with mechanical uses of writing (such as short-answer and fill-in-the-blank tasks) occurring 24 percent of observed time, note-taking 17 percent, and writing of paragraph length or longer occurring 3 percent of observed time. Similarly, homework assignments involved writing of at least paragraph length 3 percent of the time. (p. 93)

Although one cannot determine how much time on task occurred during the allocated percentages of time, it does seem clear that most writing is produced to demonstrate to teachers what has been learned or to gather information for later personal use. Almost no writing to communicate messages occurs. Indeed, almost no composition of any sort occurs.

Wolf and Greenwald (1980) video-taped 40 hours of observations in the classrooms of eight secondary teachers in four rural and suburban school districts. They then coded their observations of various sorts of reading, writing, listening, and doing activities. Their detailed coding system involves more than a dozen categories, consolidated into Literacy (reading, writing, and notetaking), Listening (lectures, directions, films, etc.), Doing (performing non-written tasks), and Other (discipline, collecting trip money, etc.). The number of minutes per day (based on five 50-minute periods) for each activity is shown in Table 2.

These studies confirm that very little writing occurs in secondary school. Most writing seems to be copying, making notes, or answering short questions to demonstrate that learning has occurred. Very little writing to communicate or to accomplish a task occurs during a typical school day.

Implications of this research for teachers are clouded by three factors. A good deal of change is presently occuring in the workplace. Literacy demands are being redefined both upwards and downwards at the same time. In addition, there are indications from several sources that transfer is minimal from general literacy training to specific job literacy tasks.

LITERACY ON THE JOB IN FLUX

Educators face a real difficulty in making plans to prepare students for workplace literacy demands. They are aiming at a moving target. To complicate factors, the movement is in several different directions rather than along a single trajectory.

Some examples should help to document the confusion. The Wall Street Journal (Hymowitz, 1981) reports that literacy demands in the workplace are increasing and that lack of literacy ability is a major economic and safety problem. New York Mutual Life reports 70% of correspondence must be redone, JLG Industries claims literacy-related production mistakes cost millions of dollars, and Westinghouse has fired

TABLE 2

CLASSROOM ACTIVITY TIMES*

Activity	Minutes Daily	
LITERACY		
Reading by itself (text, paperback, or magazine)	24	
Notetaking while reading	16	
Writing by itself (essay, dictation, lecture notes)	5	
Writing supported by reading (essay exam, translation)	30	
TOTAL		75
LISTENING		
Lecture	57	
Teacher-given directions	9	
Filmed lecture	39	
TOTAL		105
DOING		
Performance of non-written tasks		21
OTHER		
Discipline, collecting trip money, and school-related tasks	34	
Unspecified	15	
TOTAL		49

*Based on Wolf and Greenwald (1980)

workers for literacy-related safety concerns. General Motors' director of personnel claims that the auto industry's ratio of non-technical to technical jobs will change from 5.6 to 1 in 1981 to 1 to 1 in less than two decades.

Other indications of this increase in literacy demands abound. Major industries are creating pools of word-processor operators. These operators receive material from several departments. They must take rough draft and produce perfect copy. This may involve editing for subject/verb agreement errors and occasionally making rewording changes. The equipment and high skill of these operators enables them to do two to three times as much work as traditional secretaries. They are well paid for their skill. In a recent survey of Fortune 500 corporations, personnel directors were asked what happens to employees who have difficulty with written communication. The major response was that they aren't necessarily fired, but that they are often sidetracked into dead-end jobs (Mikulecky & Cousin, 1982). There are strong indications that literacy demands are rapidly increasing.

At the same time, another trend is apparent. It is possible, with automation and very low salaries, for some employers to cut costs by employing non-literates. The West Germans, for example, employ non-literate Pakistani immigrants for simple, short-term industrial jobs. When the narrowly defined job stops, so does the Pakistani. Ordinarily, this is not very cost-effective, but because the pay is so low, employers can tolerate the lack of skills and training. A similar trend seems to be emerging in the United States. Fast food chains are placing pictures on cash register keys and using computer-pricing. Mistakes can be cut while employers continue to pay very low wages. Grocery stores are beginning to use computer-pricing and check-out to increase the efficiency of cash register operators and presumably to reduce the number of cashiers needed. Banks are replacing human tellers with electronic tellers. If the move is accepted by consumers, the number of moderately trained tellers can be reduced. Fewer low-skill employees can load the machines for minimal pay while highly skilled employees

can maintain and repair them. Sears has introduced a computerized diagnostic system for auto batteries and electrical systems. The system can be operated by an adolescent with a low literacy level for considerably lower wages than an experienced mechanic would require. According to Sticht (1981), the armed forces are investing substantial resources in "cognitive robotics." State-of-the-art computer advances are being examined. A possible goal of this research could easily be to devise effective step-by-step computer instructions to less capable soldiers. Several indicators suggest a trend of using expensive technology to lower literacy requirements of some jobs. The trade-off is lower pay and machines playing a larger role in directing the activities of some persons.

THE PROBLEM OF TRANSFERABILITY

A second major difficulty faced by educators who desire to improve student abilities in functional areas is the problem of transferability. Much schooling is set up (both consciously and unconsciously) on the assumption that basic learnings and skills easily transfer from one situation to others.

The assumption of transfer of skills is easy to make in American schools. Teachers often assume that the student who does one language activity well is also competent at others. Students who write poorly on one type of assignment usually write poorly on others. The conclusion is drawn that abilities have transferred for the good student and that is why he or she does most things well. It is also assumed that the poor student hasn't yet learned the basics so nothing has transferred. An alternative explanation and conclusion can be drawn, however. Good students are absent less than poor students and tend to learn several different skills and abilities at about the same time. The result is that good students perform well on most tasks; average students who are absent more, perform less well; and poor students who are absent a great deal tend to perform poorly on many language tasks.

This situation need not imply transfer of basic skills. It can simply mean that students who attend class more often tend to learn a wider variety of skills.

There is an emerging body of research to suggest that this alternative explanation is indeed the case. Work by Scribner and Cole (1978) suggests that "the effects of literacy and perhaps of schooling as well are restricted . . . or generalized only to closely related practices" (p. 457). Sticht (1980), in commenting on research performed with the military, underscores this point. In reporting the results of programs integrating technical and literacy skill training, Sticht observes, "Job reading gains were much larger than general reading. This is important because it indicates that people are learning what they are being taught. Clearly the present results show that reading is not altogether a generic skill assessable by any test of general reading" (p. 303). Though not all this research deals purely with transfer of writing abilities, it does raise serious concern over simply assuming that a few basic writing abilities will consistently transfer to writing tasks in the workplace.

A SUCCESSFUL BUSINESS LANGUAGE-TRAINING PROGRAM

Before directly addressing the implications of this paper for teachers in schools, it will prove useful to examine a successful business training program that has a heavy language component--a training program for word-processor operators. Being a word-processor operator involves a good deal more than being a traditional secretary who knows how to operate the new machinery. Many word-processor operators work in centrally located pools or groups. Supervisors receive jobs from various departments, estimate the time needed to edit, format, and produce letter-perfect copy, and then assign the job to an operator. The operator must be able to edit for spelling, subject/verb agreement, and a number of other language flaws, and may occasionally reword sentences. Letter-perfect copy must be rapidly produced. All work is proofread and mistakes are returned for correction. Correction time is added

to total production time. In order to retain these high-paying jobs, an operator must perform at or above specified standards. Pay exceeds $20,000 a year, and word-processor operators may perform the work of two or more typical secretaries.

The Technical Assistance Training Corporation (TATC) has worked together with businesses and city government in Chicago to develop a word-processing training program (Mikulecky & Strange, 1982). Students in the program were CETA-eligible adults, many of whom were in the 18-25 year old group. An exit requirement for trainees was demonstrating competence at least equivalent to average word-processor employees in companies who participated in planning the program. Samples of reading and writing were gathered from the workplace. These averaged from tenth-grade to college level in difficulty. Screening measures were constructed and tested on actual workers to determine average ability levels. These instruments were used to screen applicants to the training program. Acceptable applicants were expected to meet industry standards in approximately one-half year of training. The TATC program set its goals high and assumed it could achieve a gain of three grade levels in a half-year of training. Applicants who could perform adequately with business materials as low as the ninth-grade level of difficulty were accepted for training. Classes of 30-35 trainees were accepted into the program. These individuals were paid to attend training for 40 hours per week. Time each day was divided among language training, typing and word-processing training, work-habits training, and individual study time. Three full-time teachers (a reading specialist, a word-processing specialist, and a business specialist) worked with students throughout the day.

The amount of time a trainee spent in any given area depended upon how much time he or she needed. Some trainees needed more emphasis in language improvement, and others more in machine skills. On the average, 20% of the time was spent attending classroom presentations and 80% working independently or in student work groups to master information presented in classes.

Assignments were planned to integrate language and machine skills. Much of the classwork simulated actual job demands. Students would compose business communication that other students would edit and later produce in final form on word processing equipment. A good deal of the work involved using actual business communication that was hand-written in rough draft form with editing notations. The job-simulation training, integrating language and machine experience, ranged from about 5% of assignments the first week to nearly 100% in the final weeks. Class assignments attempted to replicate the time constraints present in business performance. Although much of the work was done on an individual basis, some work made use of teams, which again replicated workplace conditions.

Trainee time on task ranged from 80% to 90% during any given workday. This compares to public school figures of 30% to 50%. Instructors met on a weekly basis to determine how each student's time might be most wisely allocated. Individual conferences informed students of their progress and weak areas. Feedback was also provided by wall charts that showed the average class performance on a wide selection of language and machine competencies. Wall charts showing individual performance (listed by student-number) also provided individual feedback of comparative performance.

The most clear-cut differences between this program and public-school programs had to do with application and integration of training. Training in language, work habits, and machine use was integrated so students received focused practice to meet pre-set standards. Public-school programs have a tendency to offer little integration and feedback. In addition, most school programs assume transfer of general competencies to actual job application. The TATC program assumed no such transfer and consistently used job simulation as a major training device.

Results of the program are highly encouraging. The time needed for trainees to reach job-level competence varied. The earliest trainees found employment after 14 weeks of training. The average time needed

for students to reach the pre-set standards was 20 weeks, with a few trainees taking nearly 28 weeks. During the approximately 20 weeks of training time, trainees improved in ability to read business material by an average of a full grade level. Many trainees improved considerably more than this. Even more spectacular gains were made in proofreading and editing skills.

In 1981 and 1982, the economy entered a recession that limited the ability of cooperating industries to hire acceptably trained word-processing operators. A third of the cooperating companies stopped all hiring. Several additional companies raised their hiring standards for accurate word processing speed from 55 words-per-minute to 65 or 70 words-per-minute.

In the face of these economic difficulties, slightly over one-third of the trainees found word-processing employment within a few weeks of program completion. Other trainees used the training facilities as a base for a "job-search club." The mutual support and facilities provided by the club enabled another 10% of successful trainees to find appropriate employment each month. By October 1982, over 70% of the trainees had been hired.

In summary, the word-processing program is an excellent example of how trainers can integrate language training with on-the-job training while employing insights from current research.

IMPLICATIONS FOR CLASSROOM TEACHERS

It is not realistic to expect classroom teachers to prepare students completely for the literacy demands they will face in every occupation. Occupational demands change over time, new occupations develop regularly, and demands within a given occupation may differ as one moves from workplace to workplace. In addition, most classroom teachers are ill-prepared to teach students about particular occupational demands, and the degree to which schools should tailor curriculum to the current needs of industry is an arguable issue.

To balance the picture, research results reported above indicate that little writing or reading occur in secondary school classrooms. The sorts of reading and writing that do occur are narrowly focused and provide little experience for students who face the functional writing demands outside of school and particularly in the workplace. Classroom teachers can do many things to increase the amount of writing and reading students do and to expand the students' experiences to include some of the functional literacy processes found in the workplace.

Classroom teachers should be aware that workplace writing involves communicating with others and reacting to various forms of print and graphic material. The writer nearly always has a specific audience, context, and purpose for writing in mind. An initial goal for teachers, then, should be to model this sort of writing and bring a wider variety of material into the classroom. The material can be used to help create situations that require realistic written communication. Workers daily encounter material from newspapers, pamphlets, instructions, forms, announcements, manuals, tables, graphs, charts, advertisements, and correspondence. Teachers and students can create writing assignments calling for the use of these materials to accomplish specific tasks. Examples of such assignments are listed below:

- Write a letter requesting information about a product.
- Choose a place you wish to visit. Gather information on costs for travel, lodging, food, etc. for the trip.
- Interview three adults about the sorts of reading and writing they must do on their jobs. Write a letter to the teacher (principal/superintendent/counselor) explaining what one must learn to perform these jobs.

Teachers can also do the following:

- Take advantage of Junior Achievement, book clubs, or student-run businesses. Set things up so students must do the necessary writing, record keeping, and reading to operate the business.
- Have students plan to accomplish a goal or personal dream. This may involve writing letters and using catalogs, maps, advertising, price lists, and reference books. A final business-like report can outline the resources needed and the steps that will be required to make the dream come true.
- Involve students in school workplace demands by having student appointees write and post instructions for class assignments or having students do some classroom record-keeping and form-filling.

The activities are similar in that reading and writing are used as vehicles to accomplish a task. Classroom teachers can provide training for functional writing demands in the workplace by creating situations where students legitimately need to use writing and reading.

An initial goal to accomplish these purposes is gathering materials for one's classroom. Students can learn by sharing the work of finding and bringing materials into the classroom. There are several ways teachers can create opportunities for students. For example, teachers can do the following:

- Have students use telephone directories to find business addresses,
- Assign student work groups to write and edit letters to businesses requesting materials or permission to visit businesses. The teacher can review the final version before mailing the letter,

- Assign visits to agencies and places of business for the purpose of gathering materials and interviewing personnel managers about on-the-job literacy demands.

A good many lessons can be learned from successful business training programs. Classroom teachers can accomplish a great deal if they talk less and create more opportunities for students to be actively involved in doing writing. Time on task can be increased by creating legitimate tasks and by establishing work groups to accomplish those tasks. The same work groups can be used for gathering information, skimming magazine articles, and keeping records for more traditionally academic classroom pursuits.

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WRITTEN LANGUAGE: AN ESSENTIAL COMMUNICATION SKILL FOR THE COMPETENT ADULT—A CURRICULUM MODEL

Gertrude S. Meyers
Northeastern Illinois University

Writing instruction is complex because the writing act entails the amalgamation of a number of complex skills. Spelling alone requires the simultaneous use of auditory and visual discrimination, memory, sequentialization, analysis and synthesis, and integration processes and is, therefore, one of the most sophisticated of the language skills (Johnson & Myklebust, 1967). Hunt and Hadsell (1963), in a study of spelling instruction, found that the following four factors affect the ability to spell English words: (1) ability to spell words that are phonetic, (2) ability to spell words that involve roots, prefixes, suffixes, and to use the rules for combining these elements, (3) ability to look at a word and to reproduce it later, and (4) ability to spell the "demons." Pupils with the same total score on a spelling test may have completely different problems. For writing, the individual must be competent not only in spelling, but also in punctuation, word order, grammar, and composition (Hammill, 1975).

In addition, there are various levels of written language deficiencies. For example, there is the university graduate student who can't write a grammatically correct sentence, the lawyer who can't spell, and the professor who hasn't written since her dissertation and refuses to try. In addition, many of us

have trouble knowing when to use to, too, or two, knowing when i should come before e, confusing there and their, knowing when to use the comma and when not to, confusing tenses or plurals, and so on. These are problems that many writers share, but they are not at the level of problems discussed in this paper. The weight of the problem is different when an individual cannot fill out an application, write a letter of complaint, write a letter for a job interview, fill out an order form, or write a shopping list.

THE PROBLEM

Under a grant from International Telephone and Telegraph (ITT) to Northeastern Illinois University, we have been developing a program to overcome written language deficiencies so that students can enter the clerical job market. Our target population consists of students in the Taylor Business Institute, a post-secondary secretarial school operated by ITT Educational Services. All applicants are screened to determine if they have the basic literacy skills needed to learn the necessary vocational skills. Entrance into the program requires applicants to obtain minimal scores on tests of reading, spelling, and business English. Applicants are also required to write a letter in answer to a help-wanted ad; this is done, not to screen out applicants, but to obtain a sample of their common writing errors. The following samples (originally written by hand) are taken from a recent group of applicants:

Student A

To whom it may concern,
my name is R...R... and I am refering about an add that I saw in todays Suntimes requiring that you are in need of a very good worker with experience. With the experience I do have I am in need of a job and would like to offer my services as an employee in your Company. I can be contacted at this number.

Sincerely yours

Student B

To personnel:
My name is S...H... I seen your advertisement in suntimes newspaper. I would like to apply for the secretarial position. I have no experience, but I do have training on the IBM typewriter and adding machine.

Thank you

Student C

Dear Sears,
My name is P...N... and I'am interested in a job opening you have. How I came across the add was in the paper. I have decided that this is the kind of work I'am looking for. I have had typing and can typing 50 w/m and I take short hand at 90% accurrcy. I feel that I am qualified for the job. I would like to make an appointment for an interview.

Thank you

Student D

Dear Sirs:
I am writing regarding your secretarial position. I am very interested and would like to be set up for an interview at our earlies convience. My qualition are typing 55 wmp and shorthand. I can be reach at .....

Sincerely Your,

Student E

To: whom it may concern:
I read in Sunday Suntine newspaper that you Sears Roebuck Co. had and opening for a Secterary. My name is V...S... and I feel I'm have the capiablity for the job. I had traing for the field of secterary a year of shorthand 90 words

per min 45 word min in Typeetc. And wood like to make a pointent for a interview with you on your convience you may reach me at nomber .....

Sincrly

It is scandalous that after spending twelve years in school, these writers have so little competence in written language. An uninformed reader might jump to the conclusion that these writers are illiterate or mentally handicapped. Test results indicate that neither is the case. The Business English Test is a multiple-choice test of 110 questions; 50 correct answers is the minimum requirement for acceptance into the program. On the Wide Range Achievement Spelling Test of 46 words, a score of 14 is required. On the SRA Reading Index, there are 13 questions, with 7 correct answers (fifth grade reading equivalent) the requirement for acceptance in the program. The following are the scores of the letter writers.

Student	Test	Score
A	Business English Test	57
	Wide Range Achievement Test	21
	SRA Reading Index	9
B	Business English Test	66
	Wide Range Achievement Test	30
	SRA Reading Index	9
C	Business English Test	53
	Wide Range Achievement Test	17
	SRA Reading Index	11
D	Business English Test	55
	Wide Range Achievement Test	20
	SRA Reading Index	10
E	Business English Test	54
	Wide Range Achievement Test	15
	SRA Reading Index	10

However, we do find an occasional individual who is close to being a non-reader; but in our last group of 35 applicants, only two failed to obtain a passing score on the SRA Reading Index.

THE PROGRAM

The program has changed considerably over the past seven years, but the vocational readiness of the applicants has not. Students still enter the school with written language equivalencies ranging from fifth to seventh grades. Since the population is predominantly Black, some of the deficiencies in written language may result from students' non-standard dialects. We make no effort to change oral dialect, but focus on deficiencies in standard written language instead. For this population, deficiencies center on subject-verb agreement, forms of the verb _be_, incorrect use of pronouns, and _-ed_ and _-s_ endings. Overcoming these problems requires constant attention. Common or predominant errors are corrected through a variety of methods. Correct usage is reinforced through reading another person's written language, proofing one's own writing, and reading material aloud word-by-word. An important aspect of the program is that teachers make students aware of their individual errors.

Individual needs are delineated by reference to each student's written language sample. Kraus (1957) found that the most helpful technique for improving sentence structure was to base lessons on errors made by the student. According to Kraus, practice on isolated rules and single sentences does not help. Yet many English teachers teach only from the assigned textbook, covering each page and each rule in a ritualistic sequence. For example, an English teacher expounding on pronoun forms or paralogisms may be faithfully following the text, but it is unlikely that either exercise will improve students' writing. Knowing abstract precepts of traditional grammar is fine if you are going to be a grammarian; but if you are going to take dictation, be a medical transcriber or a clerk typist, such knowledge is unnecessary. English teachers must learn to use textbooks selectively, choosing only those sections and rules that address students' needs. Student time is better spent in actual writing practice.

It has been our experience that young adults need auditory input, visual input, and motor output. Students need to hear, see, and write. We discovered that material on filmstrips only or on audio-cassettes only had to be discarded because there was no simultaneous auditory and visual input. Videotapes, filmstrips with audio-cassettes, and transparencies are much more effective.

An essential requirement of the program is that every teacher must be a teacher of English. Unfortunately, many teachers are ill-prepared for this task. In high school, the history teacher teaches only history, the English teacher teaches only English, the science teacher teaches only science. This is not the way it should be in the high school or in a training program for adults. Where there are written language deficiencies, every teacher, even those who teach typing, bookkeeping, shorthand, or auto mechanics, must be a teacher of writing. Errors in writing must be attended to, whatever the content of the class. The vocational education teacher does not need to know all of the rules of grammar, but he or she must be aware of the need for student practice in correct usage.

The program includes an ongoing evaluation. There is a pre-test and a corresponding post-test in each subject. The evaluation system discloses the weaknesses in teaching methods and materials and points out areas that need additional attention. The pre- and post-test information is also important for students who want to know and need to know the progress they are making toward their goals.

MATERIALS

Based on our experience with English texts, only sections of the following books are used: English 2600, English 3200, Business English, English Style Skill Builders: A Self-Improvement Program for Transcribers and Typists, and a spelling program developed by our faculty. Other materials of value include transparencies developed by teachers for overhead projectors, and the System 80 kits for phonics and sen-

tence structure. In addition, filmstrips with audio-cassettes cover such topics as vocabulary development, English grammar, and basic writing skills for everyday life (see Appendix).

Every step of the program is geared to help the student reach vocational goals. In this case, written language is a major part of attaining these goals. In the nine to twelve months these young adults are in our program, they improve their writing skills, begin watching for their errors, and learn how to get help from the resources used in their training.

WRITTEN LANGUAGE AND ADULT COMPETENCE

The adults we have been working with, who range in age from 19 to 25, are seeking competence for specific kinds of jobs. Today's post-secondary schools, whether public or proprietary, are receiving adults of all ages in need of training. Many of these schools face problems similar to those at Taylor and some of what we have developed can be useful to other programs. Our common objectives are (1) to identify the specific job-related literacy skills that students need and (2) to provide an opportunity for them to master those skills.

The purpose of the Adult Performance Level survey conducted by the U.S. Office of Education a few years ago (APLP, 1975) was to develop a broader definition of literacy. The researchers used the term "functional competency" to define the minimal academic abilities of American adults. They concluded that "functional competency is a construct which is meaningful only in a specific societal context . . . just as functional competency is culture-bound, it is perhaps even more closely bound to the technological state of a particular society" (pp. 8-9). Further, the study provided the useful notion that functional competency is a dynamic process; as the requirements of society change, the individual must acquire more and different knowledge and skills.

At one period in our history, individuals were considered literate if they could read at the fourth grade level and sign their names. In our society

today, individuals with those same minimal skills can do only the most menial jobs. The Adult Performance Level study proposed that functional competency be viewed as the application of certain basic skills to certain areas of general knowledge. The matrix in Figure 1 shows how these components are related:

	Communication	Computation	Problem-Solving	Interpersonal Relations
Consumer Economics				
Occupational Knowledge				
Health				
Community Resources				
Government and Law				

Figure 1: Taxonomy of Functional Competency (Adapted from APLP, 1975)

One important finding of the APL survey was that 16.4% of the adults in the United States, or some 18.9 million persons, were unable to cope successfully with written language. An additional 25.5% were found to be functional but not proficient in written language. These findings were not based on tests of spelling, punctuation, or grammar, but on the actual writing skills that adults use in everyday living. Below is a list of writing tasks that were included in the survey of 3500 adults in 30 states:

Writing a business letter
Writing a response to an employment ad
Completing an employment application
Filling out a Social Security form
Applying for a loan
Completing a letter to a Congressional representative

Writing a note to a teacher to excuse a child's absence
Addressing an envelope
Completing a complaint form
Filling out a check in a business transaction

An analysis of the responses revealed that 14% made such serious errors in filling out a check that the check would probably not be cleared. In the note to the teacher, 22% did not have a salutation, 7% had no comprehensible message, 7% did not identify the child, 29% had no signature, and 3% were so poorly written they were illegible. In addressing an envelope, 13% did not address the envelope well enough to assure it would reach its destination, and 24% did not use a return address on the envelope.

Written language is seldom taught as a communication necessity, as demonstrated by the samples cited earlier. Rather it is most frequently taught through grammar exercises, book reviews, and essays. The student who is not college-bound gets very little practice with written language. Written language needs to be brought to life--to be related to daily living, to employment, and to interpersonal relations.

Judging by the students who apply to the Taylor Business Institute, and in spite of continuing complaints about the poor writing skills of high school graduates, not much has changed in the practice of teaching English. At the same time, technological changes in business and industry are demanding greater competency in all skills. We can anticipate that many adults seeking job training also need training in written language.

WRITTEN LANGUAGE AND EMPLOYMENT

Functional written language is a requirement for attaining employment, and proficiency in written language is essential for advancement in most jobs. Table 1 describes written language tasks derived from the Occupational Outlook Handbook (U.S. Department of Labor, 1982-1983). The book analyzes some 23,000 jobs for entry requirements, advancement requirements, tasks

involved, and opportunities. Only the written language requirements are listed below. All positions listed require an application to be filled out correctly, some require resumes, and some require written tests for advancement. The tasks outlined are on-the-job tasks.

Table 1
Job-Related Writing Tasks

Occupation	Writing Skills for Job Entry	Writing Skills for Advancement
File Clerk	Alphabetize, spell correctly, keep records, write memos	Read material, file correctly, establish filing system, send memos to departments
Shipping and Receiving Clerk	Address packages, fill out invoices, write condition of merchandise, label items	Take inventory, prepare orders, write reports, organize storage system
Business Machine Repairer	Take tests, set up maintenance schedules, arrange schedules, write reports, order inventory	Attend seminars, check on inventories, read and write reports
Computer Repairer	Keep records of preventative maintenance and repairs, fill out time and expense reports, keep inventory records, order parts	Attend training sessions, take courses for advanced training
Telephone Operator	Spell correctly, keep records of calls, find information quickly, write up complaints	Take advanced training to become supervisor
Respiratory Therapy Technician	Keep records, write reports, write procedures	Take written exams for advancement

Whether one applies for one of the above jobs or for a position as a hotel clerk, a cosmetician, a restaurant worker, or a salesperson, writing skills are an essential prerequisite for the job.

A PRACTICAL WRITING CURRICULUM FOR THE POST-SECONDARY ADULT

Adults entering a post-secondary program have a variety of goals. They may wish to upgrade their skills in a specific area, qualify for a new career, meet the challenge of technological change, or get off welfare rolls. Instruction in written communication needs to be geared to the requirements of the vocational goal and to become the instrument for improving spelling, grammar, punctuation, and other encoding skills.

The first step in designing a practical writing curriculum is a needs analysis of the written language skills of the student. The second is a task analysis of the written language requirements of the vocation. The vocabulary of the vocation must be internalized by the student so that it becomes automatic for writing purposes. In addition, the written language system of the vocation should be practiced, for example, by writing inventory lists, invoices, receipts, or reports. Or the task may involve ordering parts, writing answers to complaints, or keeping daily logs. Who will provide this job-specific instruction? Not the English teacher, but the electronics teacher, the small-appliance teacher, or the health-care teacher.

The important issue is that written language skills must be included in the content of whatever is being taught. This brings us to the need for a similar model for the high school curriculum.

CURRICULUM MODEL FOR THE HIGH SCHOOL STUDENT

Many high school students have written language deficiencies; therefore, written language must be

included in the content of all courses and should be relevant and functional. The following clusters of skills can be the objectives for teachers in presenting spelling, grammar, punctuation, and sentence structure, and can be taught in English, industrial arts, social studies, economics, consumer math, etc.

Task: Fill Out Forms

W2 form
Driver's license application
Health record
Job application
Application to a school
Application for a dog license
Bank form
Income tax forms
Passport application
Loan application

Task: Prepare Lists of Items

Shopping list: food, clothing, furniture, cosmetics
Supply order
Inventory list
Parts order for car, motorcycle, bicycle
Repair list: house, car, yard, lawn

Task: Compose Letters of Request and of Complaint

Reservations
Requests for information: schools, jobs, advertised items
Complaints about products, services
Complaints about a job

Task: Write Resumes

For job
For a school
For promotion
For pay increase

Task: Write Letters to Friends and Relatives

Letters of thanks
Letters of sympathy
Letters of inquiry
Invitations
Letters about activities and plans

Task: Write Letters to Official Bodies

To schools
To city agencies: mayor, city council
To county services: child and family services
To state agencies: youth services, employment office
To state representatives and senators
To the governor
To congressmen and senators
To the President
To community resources
To consumer agencies

Task: Compose Letters to the Press, Radio Stations, TV Stations

Letters of praise
Letters of criticism
Letters presenting a point of view
Letters asking for information

Task: Compose Reports

Report of a transaction
Daily log of activity
Report on an inventory
Research report on a career of interest
Report of an interview

SUMMARY

Teaching written language to the adult is very different from teaching the school-age child because such instruction must, out of necessity, be more closely geared to the demands of everyday living. By knowing those demands, we will have a better grasp of how to prepare our students for the world of work. Everyone needs the English language for spoken and written communication, and no one should be denied that right. Just as we want 100% of our population to be functionally competent in reading, so we must demand that 100% of the population be functionally competent in writing.

In today's job market, 67% of the population are employed in service industries and 27% are employed in manufacturing, farming, and mining. Moreover, by 1990 the service industries will claim an even greater share of the job market, with the result that the functionally incompetent adult will be virtually unemployable. The technological development in our country requires that we in education meet the challenge.

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BIOGRAPHICAL NOTES

EVELYN JACOB is an Assistant Professor of Education at George Mason University in Fairfax, Virginia, and is also associated with the Center for Applied Linguistics in Washington, D.C. She has investigated the uses of literacy among industrial workers in the United States and has also conducted anthropological field work in Latin America. Dr. Jacob has published articles in both education and anthropology, and has presented papers on her work at professional meetings in both fields.

GERTRUDE MEYERS is an Associate Professor of Special Education at Northeastern Illinois University in Chicago. Currently involved in designing language arts curricula for underprepared adults, Mrs. Meyers has an extensive background in adult and remedial education. She has published several articles in educational journals.

LARRY MIKULECKY is an Associate Professor of Language Education at Indiana University in Bloomington. Dr. Mikulecky has conducted research on literacy in a variety of job-settings and is a consultant to both government agencies and private corporations. He has authored two books and a number of journal articles, and has frequently made presentations to professional organizations.

RUTH MITCHELL is a lecturer in writing at the University of California, Los Angeles, and is also an administrator in the university's Office of Academic Interinstitutional Programs. She has also served as Co-Director of the UCLA Writing Project and as a consultant to private industry. Dr. Mitchell has published numerous articles in professional journals and has made several presentations at professional conferences.

MAHLON PURYEAR is the Executive President of the Orange County (California) Urban League. Active in Urban League affairs since 1940, Mr. Puryear is nationally recognized for his work in job development and employment and is a member of the Federal Advisory Council on Unemployment Insurance for the United States Department of Labor.

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